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Richard F. Celeste, Governor
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DIVISION OF GEOLOGICAL SURVEY
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# 1988 REPORT ON OHIO MINERAL INDUSTRIES

WITH

DIRECTORIES OF REPORTING
COAL AND INDUSTRIAL MINERAL OPERATORS

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# 1988 REPORT ON OHIO MINERAL INDUSTRIES

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compiled by

Sherry W. Lopez

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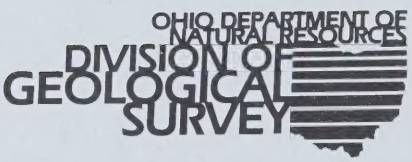


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Cover photo: The sand-dredging vessel *F. M. Osborne* with a load of sand dredged from the bed of Lake Erie. See article on the Lake Erie sand and gravel industry beginning on p. 1.

## FOREWORD

There are two additions and two changes in the 1988 *Report on Ohio mineral industries.* One addition involves the 1988 *Mineral industries map of Ohio.* All of the coal-preparation plants in Ohio are now located on the map. The other addition is in the report. Located in front of each by-county directory, with the exception of salt, gypsum, and peat, is an alphabetical list of the producing companies for the year with their respective total tons sold and produced. The changes in the report are changes in terminology to better reflect current industry terminology. Bituminous concrete is now termed asphaltic concrete. Likewise, metallurgical stone is now termed flux stone. As usual, all of the changes and additions have been made to increase the clarity and usefulness of the report to the public. Any comments on how this report can better serve those interested in mineral resources in Ohio are always welcome.

Many operators have asked, "Why must we complete and return the quarterly reporting forms? What is this information used for?" I hope the following explanation of the importance of the annual *Report on Ohio mineral industries* will answer these questions.

All operators are required by law (Ohio Revised Code, Section 1505.10) to complete and return the quarterly forms. This requirement is not meant to burden Ohio's mineral producers, but rather to provide information which will be used to support the development of minerals in Ohio. Prompt completion and return of the quarterly forms is the only way complete and accurate data on the mineral industries can be compiled. This information is then published in our annual *Report on Ohio mineral industries,* which is sent free of charge to all coal and industrial mineral producers in Ohio.

The annual *Report on Ohio mineral industries* has been referred to as the bible of Ohio's mineral industries. Businesses and industries outside of Ohio use the information to determine whether they should extend their services or facilities into Ohio. Businesses both inside and outside of Ohio use the information to determine where they might buy specific resources, such as high-calcium limestone, pure-silica sand, or common sand and gravel. Many companies use the production data to locate new mineral sources to supply their manufacturing needs. For example, a company in Michigan used the report to locate a new source of lightweight aggregate. A company in Canada used the report to locate a source for trap sand. Utility companies also use the report to update their coal operator addresses and to identify new coal producers, both large and small. This is one way that the utilities locate new supplies of coal.

At the Division of Geological Survey, we receive many calls each year requesting a list of industrial mineral and coal companies meeting specific production requirements. We are told this often results in increased sales for the companies meeting the largest number of these requirements. Geologists at the Survey use the information as one means of tracking remaining natural resources. The information the report contains also is used by legislators to make economic decisions for the state. Newspaper and radio reporters use the information to inform the public on the status of Ohio's economy and employment. The Governor often uses information from the report for his State of the State address to tell the people in Ohio the status of the coal and industrial mineral industries. If the operators do not complete and return the quarterly forms, the Governor does not know whether coal and industrial mineral production or employment in Ohio is up or down. Without the information in the report, the state legislature will not know how to vote on issues pertaining to the mining industry. Thus, this information is compiled and published to help the operators as well as other businesses, government agencies, and the general public.

Sherry W. Lopez
Geologist and
Mineral Statistician

Errata for
1987 report
now available
upon request

# THE LAKE ERIE SAND AND GRAVEL INDUSTRY IN OHIO

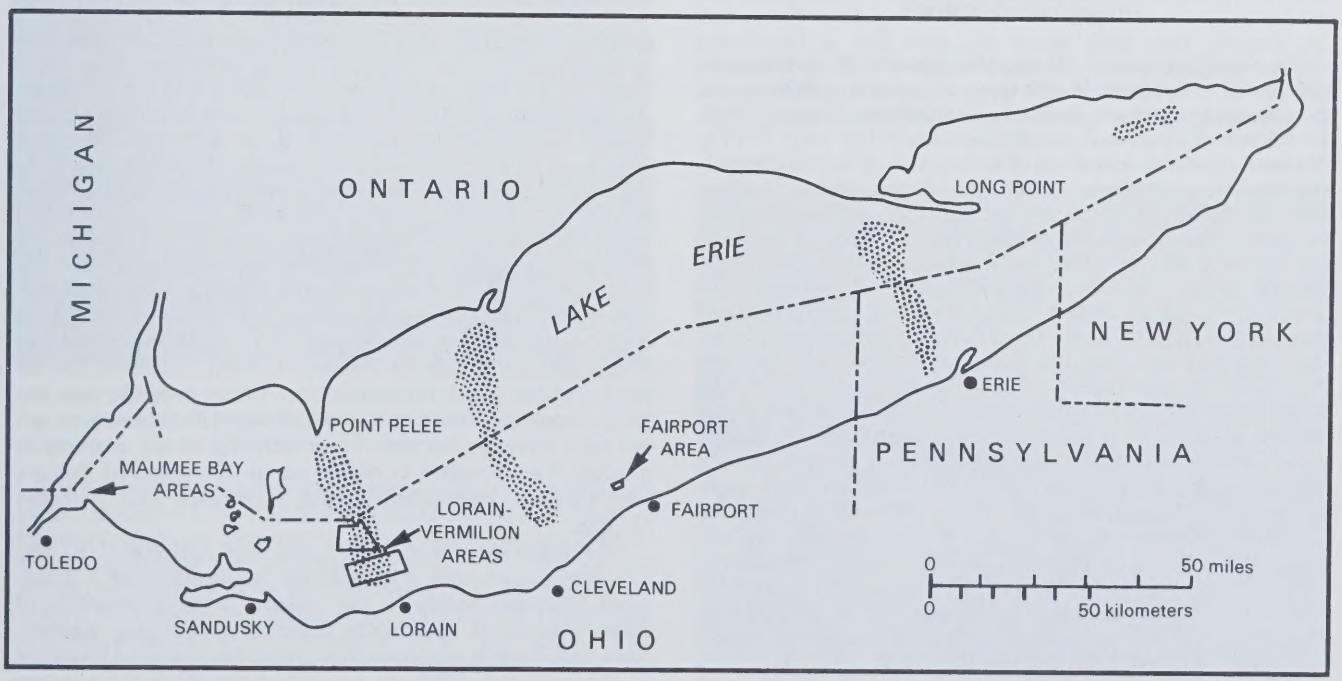
by Dale L. Liebenthal
Ohio Department of Natural Resources
Division of Geological Survey, Lake Erie Section

## ORIGIN OF DEPOSITS

Deposits of sand and gravel lie under 35 to 80 feet of water on the bed of Lake Erie from Lorain, Ohio, to Point Pelee, Ontario, Canada, and from Erie, Pennsylvania, to Long Point, Ontario, Canada (see map). These deposits are partially surficial and partially covered with a few inches to several feet of overlying sediment, or overburden, which must be removed before extraction of the sand and gravel. These deposits formed during the late-glacial/postglacial period between 14,500 and 12,500 years ago. Geologists once thought deglaciation was a gradual, uniform retreat, but now think that the process was very complex. The most recent glacial retreat and minor readvances around Lake Erie lasted more than 2,000 years and caused widely changing lake levels owing to opening of different meltwater outlets at various stages of retreat. Some sand and gravel deposits of these lake stages are still exposed on the lake bottom today, others are buried beneath the mud deposits of later stages of Lake Erie. Bathymetric records and sediment sampling show the Lake Erie basin is separated by three cross-lake ridges, or moraines, created by glacial activity. These ridges of sediment mark the advance and subsequent retreat of the glacier at various stages. As the glacier retreated in response to warming climatic conditions, sand, gravel, and other debris were deposited at the edge of the floating glacier.

As the ice finally retreated north of Niagara Falls, a new outlet to the northeast was opened. The elevation of the bedrock floor of this outlet was much lower than today because of the great weight of ice that had lain upon it. At this stage, Lake Erie was much lower than today. As the bedrock outlet slowly rose in response to removal of the ice load, so did the lake level. These lakes, at various levels, formed shorelines on the moraines which corresponded to stages of retreat of the glacier. Wave action and littoral currents reworked residual sand and gravel along these ancient shorelines in the same manner as beaches are formed today. Lake level slowly rose as the glacier retreated farther north, opening the inflows from the upper lakes through Lake Erie to bring the lake to near-present levels. The deposits of sand and gravel associated with the now-submerged moraines remain as evidence of our geologic past. Most of the bedrock of the Lake Erie basin is shale and limestone, which are not good sources of sand or gravel; therefore, these sand and gravel deposits represent a valuable resource to Ohioans.

The existence of the submerged ridges on the lake-




Principal sand deposits and Ohio dredging areas in Lake Erie. Cross-lake moraines indicated by dot pattern.

bottom surface has been known for some time. Undiscovered deposits beneath thin overburden also undoubtedly exist and may be suitable for commercial use or for beach replenishment. Little is known of the detailed subbottom characteristics of Lake Erie.

## COMMERCIAL PRODUCTION

Sand and gravel have been commercially dredged from the bed of Lake Erie since the early 1870's. The bed of the lake beneath Ohio waters is owned by the State of Ohio, and more than $2.1 million in royalties have been paid to the State for removal of sand and gravel since 1949. Commercial dredging has removed more than 23.5 million tons of these commodities from the lake bed and from the bed of the Maumee River for use in the construction industry, principally in the counties bordering Lake Erie.

Commercial dredging can take place only within authorized areas (shown on accompanying map). The Ohio permit areas in Lake Erie presently established by law are in Maumee Bay, offshore from Lorain-Vermilion (two areas), and offshore from Fairport Harbor. All areas are located several miles offshore to eliminate the possibility of damage to the shoreline and to prevent interference with the littoral transport system. In addition to areas in Ohio waters, commercial dredge vessels in Lake Erie use areas established by the Commonwealth of Pennsylvania offshore from Erie and by the Canadian government offshore from Point Pelee.

The permit areas contain different grades of sand (although gravel is available in these areas, sand is predominant). At times, to meet state specifications on size and composition, the vessel may need to mix two types of sand, requiring the vessel, for example, to leave Cleveland and travel to Erie, Pennsylvania, pump half a load, travel to Fairport Harbor to finish the load, and then travel to the port where the load is to be delivered, possibly as far away as Toledo.

## DREDGING METHODS

The dredging vessels all use the same method for sand and gravel extraction. In the past, a barrel would be set in the permit area where desired materials were found. With the advent of electronic navigation aids in the early 1970's, this time-consuming method of location could be eliminated. Now vessels use a device called Long Range Aid to Navigation, or LORAN-C. This electronic navigation instrument allows the operator to locate the permit area in all types of weather and also provides the coordinates of materials of desired quality within the permit area as a reference for successive trips. Dredging is done with a long steel and rubber pipe called a drag. The drag is 12 inches or more in diameter and has a boxlike free end called the hood. The bottom of the hood has an open, square, steel grid which keeps logs and other debris out of the drag. The drag is carried at deck level alongside the ship while the vessel travels to the dredge area. When the captain determines that the ship is over an area of sand (or gravel) of the type called for in his orders, the drag is lowered. During the loading process the vessel circles slowly over the desired material. As the hood drags along the bottom, the grid on the hood breaks up the compacted sand, allowing it to be sucked up the pipe by huge centrifugal suction pumps as a slurry of sand and water. These powerful pumps can bring sand to the surface from depths of 90 feet.

After passing through the pump, the slurry of sand passes down a trough running the length of the cargo bin or hold. This trough has openings in the bottom spaced evenly along its length; the openings have removable screens corresponding in size to the size of sand desired. The material is sized to specifications as it drops through these openings into the hold of the vessel. Each opening can be shut off so that the crew can balance the load evenly along the hold to keep the ship's center of gravity level for seakeeping ability.

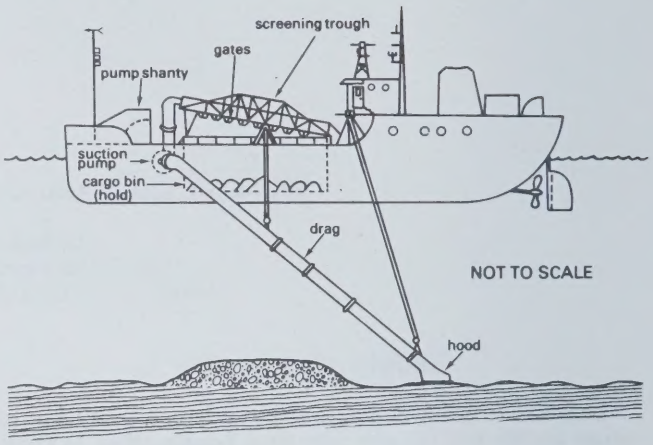



Diagram of a typical dredging vessel (modified from Berkheiser, 1987, p. 3).

Undesirable sand, silt, clay, and shell particles are carried along in suspension owing to their lower specific gravity and are washed overboard. The vessel captain must have an intimate knowledge of sand quality within the permit area because sand quality commonly changes during loading, requiring the vessel to stop loading and move to another area. When the vessel again comes over sand of the desired quality, loading resumes. This procedure is called "prospecting."

Experienced lake men can differentiate high-quality sand at a glance from poorly graded, dirty, or high-shell-content sand. Colloquial terms used to describe marketable-size sand are "buckshot," which is granule-size material (2.38 mm in diameter, U.S. Standard Sieve Size No. 8) used for filter sand; "coffee grounds," very coarse sand (1.19 mm in diameter, Sieve Size No. 16) used as filter and concrete sand; and "snuff," very fine sand (0.125 mm in diameter, Sieve Size No. 120) used as molding sand, in asphalt-roofing-shingle production, and even as a mixture with soil for golf course greens.

Offshore sources of sand in Ohio lack sizes in the No. 30 (0.59 mm) to No. 50 (0.30 mm) sieve-size range. It has been suggested (Folk, 1964) that there is a relative scarcity in nature of these sizes. Operators thus have to mix sand from different sources to attain specifications. Sand from Lake Erie is primarily used for masonry cement, concrete, and fill sand and for beach replenishment. Other possible uses are as iron molding, filter, and grouting sand, but these uses are not cost effective because much refining of the material is needed. The product is delivered to the ports of Toledo, Port Clinton, Sandusky, Lorain, Cleveland, and Fairport Harbor.

The hydraulic method of mining sand and gravel in Lake Erie has advantages. For example, sized material is somewhat localized owing to the natural sorting property of water-deposited sediments. Hydraulic dredging washes, sizes, and loads in one operation, requiring minimal handling of the material. Offshore deposits have other advantages over onshore deposits of sand and gravel—onshore mining must compete with other land uses because such deposits

are excellent sites for construction and development, and onshore mining sites must incur reclamation costs.

## DREDGING VESSELS

All of the operating commercial sand dredges on Lake Erie are converted freight or bulk carriers. These vessels have been retrofitted with the pumps and equipment necessary for dredging. Older vessels were always selected because their shorter length allows maneuverability in small harbors and efficiency of operation.

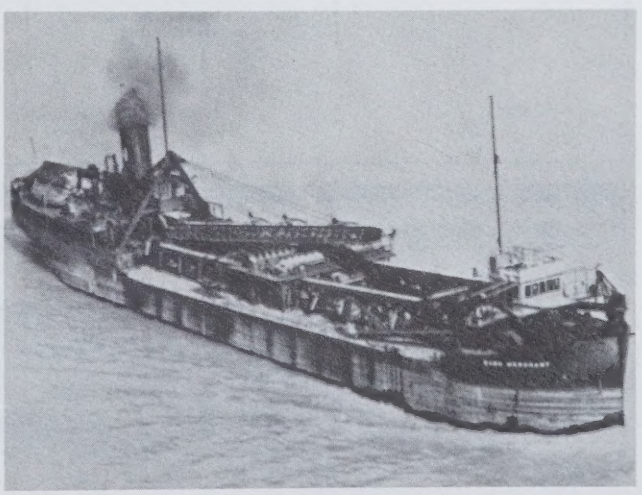
Only two companies—Erie Sand Steamship Co. (including its subsidiary, Erie Sand & Gravel Co.) and Osborne Materials Co.—presently dredge in the Ohio permit areas. The Erie Sand Steamship Co. is based in Erie, Pennsylvania, and owns two vessels. The motor vessel *J. S. St. John* was built as a Navy oiler in 1945 by Smiths Shipyard of Pensacola, Florida. She was purchased and converted to a dredge vessel in 1967 and is based in Erie. The *J. S. St. John* is 174 feet long, 32 feet in beam (wide), 13 feet in draft (depth of hull below waterline), and has a capacity of 575 cubic yards. The other Erie Sand Steamship Co. vessel actively dredging Ohio waters is the *John R. Emery*, based in Sandusky, Ohio. This ship was built in Buffalo, New York, in 1905 and was originally named the *Trenton*. The *John R. Emery* is 140 feet long, 33 feet in beam, 10 feet in draft, and holds approximately 380 cubic yards. She carries a crew of four. The Osborne Materials Co. is based in Grand River, Ohio, adjacent to Fairport Harbor. Their vessel, the *F. M. Osborne*, originally named the *Grand Island*, was built in Buffalo, New York, in 1910. In 1975, the vessel was completely rebuilt to the standards of the American Bureau of Shipping and renamed. The *F. M. Osborne* carries a crew of four and holds approximately 280 cubic yards of sand.

The *F. M. Osborne*. Photo used with permission of Freshwater Press, Inc.

The commercial dredging industry has been on a gradual decline for some time. National economic trends have had a definite impact on volume of materials sold. The number of vessels operating has declined from nine in 1947 to the current number of three. This decline is due to a number of factors. The decentralization of construction of roads and buildings away from the cities to suburbs farther from the lakeshore ports has increased transportation costs for lake-derived materials. Sand and gravel are high-bulk, low-profit items. The cost is controlled largely by the cost of transportation from the port to the point of use. Loss of some heavy industry, such as the U.S. Steel Corp. in Cleveland, from lake ports has been a detriment. Marketable sand volumes in Ohio waters have been reduced by past dredging, requiring vessel operators to spend more time prospecting. In addition, undesirable material washed overboard during each loading settles over the remaining sand and reduces the quality of future loadings. Because of the need to mix loads to attain specifications, ships cannot sail the most cost-effective routes. Another problem is that the vessels are the oldest operating on the Great Lakes, and retrofitting these ships to modern systems, including drydock and routine maintenance, results in high overhead costs.

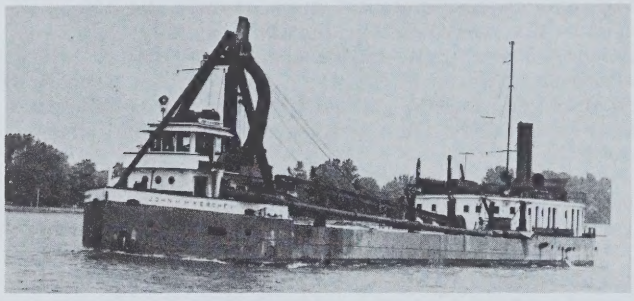
## HISTORY OF DREDGING

Mining and transporting sand and gravel on Lake Erie has had a rich history, dating back to the early 1870's. The Great Lakes provided the means to transport bulk materials most efficiently. Transporting materials by water has always had its risks, but before the development of radio, electronic navigation aids, advanced ship design, and weather forecasting, sailing on the Great Lakes was very hazardous to ship and crew. Many vessels sailed away in the early days never to return, caught in storms on the wide expanses of the lakes with no protection and no means to call for assistance. It was never known how these ships met their fate. A documented account of the demise of the dredge *Sand Merchant* illustrates the dangers to life and property that were a fact of life to those who mined and transported bulk materials on Lake Erie. The *Sand Merchant*, bound for Cleveland with a load of sand which she had loaded from the bottom of Lake Erie near Point Pelee, encountered a gale on October 17, 1936. Battered by 10- to 12-foot waves, the ship began to take in water faster than her pumps could get rid of it. The ship was riding low in the water from the weight of her load, and water mixed with her sand cargo, causing the load to shift. The vessel began to lean to one side. The crew worked desperately to attempt to right the vessel before she rolled completely over. But waves continued to roll over her cargo hold and flooded the pumps entirely. Cleveland was only 17 miles ahead, but the ship would never make port. The 252-foot ship, only nine years old, suddenly rolled on her side and slid beneath the



The *Sand Merchant*, which sank in 1936. Photo used with permission of Freshwater Press, Inc.

seas. Those of the crew who did not go down with the ship clung to two overturned lifeboats. By morning, only seven of her original crew of 26 were rescued. Eighteen men and one woman perished within sight of the lights of Cleveland. All this for a load of common sand! The *Sand Merchant* still lies on the bottom of Lake Erie today.



The *John McKerchey*, which foundered in 1950.
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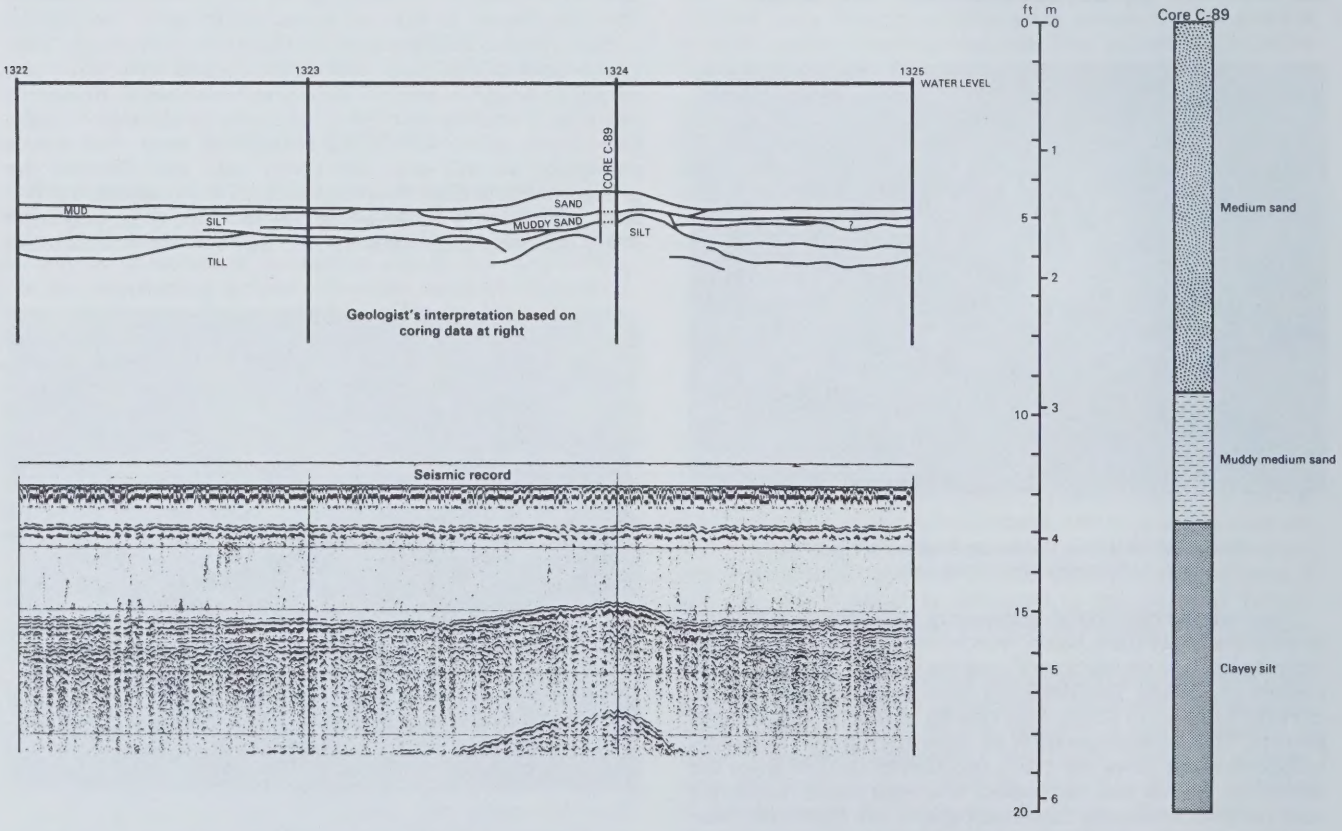
Danger at times can be close, even for temporary passengers. In 1949, the U.S. Army, Corps of Engineers, in cooperation with the State of Ohio, initiated a survey of the Lorain-Vermilion and Fairport deposits to determine the possibility of using the materials for artificial beach replenishment. The study involved analysis of surface-material composition (*i.e.*, clay, mud, or clean sand) and topography and attempted to determine thickness in order to calculate volume. The field work was done from May 24-27, 1950, aboard the *John McKerchey*, a 180-foot-long sand dredge owned by the Kelleys Island Lime and Transport Co. of Sandusky. Aboard were Jerry Lynde of the Corps of Engineers, William Smith of the Ohio Division of Geological Survey, and John Bartlett of the Ohio Division of Beach Erosion. The survey was uneventful and raised more questions than it answered. The study was limited to only one-tenth of the estimated reserve. Sampling methods were primitive. Surface samples were retrieved by lowering a weighted line "armed with soft soap" on the end and observing what remained on the soap after it was pulled through 45 to 50 feet of water. This is a unique definition of clean sand! A clam bucket was used to estimate thickness, a doubtful method at best. The most fortunate concern of the study was that it was not postponed until fall. For just five months later, on October 16, 1950, the *John McKerchey* foundered off Lorain and one crewman was lost.

## PRESENT RESEARCH

Improved mapping of the distribution and movement of the surficial and subsurface sediments in Lake Erie is needed to manage the resources and to increase commercial use of these sediments. Mud, sand, and rock areas need to be accurately mapped and monitored for resource-recovery programs and for environmental-protection purposes. Air-vibration coring is one method used to physically examine lake sediments, although it is expensive and time consuming. A somewhat newer method has developed in recent years called seismic reflection profiling, or subbottom profiling. Seismic reflection profiling is a technique for delineating geologic features such as bedding surfaces, faults, channels, sedimentary units, and other structures beneath the lake floor. Continuous seismic profiles are obtained by generating a high-energy sound signal in pulses




Seismic record (below) and geologist's interpretations (above) based on coring data (on right).

just below the water surface and recording the "echoes" from the acoustic interfaces between dissimilar materials. In general, the composition and physical properties (*e.g.*, porosity, water content, relative density) which commonly differentiate sediments and rocks also serve to produce acoustic contrasts, called reflectors, which show as dark lines on the seismic records. The sound-generating device is towed behind the research vessel using precision positioning equipment for accurate location. The record obtained is then analyzed by geologists by comparing the reflectors with known features obtained by surface sampling and coring in selected sites (see accompanying diagram). Reasonable accuracy can be obtained in mapping unit contacts in this manner while limiting drastically the number of cores that have to be taken.

Mapping of the surface materials on the lake bottom is done most effectively by an instrument known as side-scan sonar, consisting of a transducer, amplifier, and recorder. When towed behind a research vessel, the transducer emits sound pulses of specific frequency on an angle from the vessel to the lake bottom. The reflection of the sound pulses is received and amplified on a chart recording to provide an "electronic picture" of the bottom surface. Some of these instruments can show features as small as 3 cm in height, allowing interpretation of rock outcroppings, rough and smooth mud, sand ripples, gravel, and contacts between materials. Areas of exposed sand and gravel can be mapped on the lake-bottom surface for commercial needs, shore protection, and fisheries habitat. The latest technology employs a subbottom profiler with the side-scan sonar as one unit, allowing geologists to interpret the relationship between subbottom and surface characteristics. Presently, there are plans to employ this new technology on Lake Erie to search for new mineral resources for Ohioans.

## ACKNOWLEDGMENTS

The kind assistance of Mr. Richard Kight, vice president of Erie Sand & Gravel Co., and Jonathan Fuller, geologist with the Ohio Division of Geological Survey, was most helpful in the preparation of this article. Marine historian Gordon Wendt helped to locate rare photos. His assistance is most appreciated.

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## OHIO'S SMALL OPERATOR ASSISTANCE PROGRAM

by Donald L. Povolny, Program Coordinator
Ohio Department of Natural Resources, Division of Reclamation

### INTRODUCTION AND BACKGROUND

The Small Operator Assistance Program (SOAP) is a federally funded, state-administered program for Ohio's small coal operators. As it pertains to this program a small coal operator is defined as one whose total coal production does not exceed 100,000 tons in any consecutive 12-month period. The purpose of SOAP is, for eligible coal operators, to pay for hydrologic/geologic studies which are a required part of the permit application for an Ohio coal mining and reclamation permit.

Ohio's Small Operator Assistance Program was started in January 1980. Since that time the program has assisted 151 coal companies with over 400 projects, and over $2.8 million has been spent or allocated assisting Ohio's small coal operators with these projects. Approximately 7 percent of Ohio's total coal production is produced by small operators, who account for approximately 60 percent of the total number of coal companies operating in the state. In 1987 the total coal production in Ohio was reported at 33,152,316 tons, of which small operators produced approximately 2,175,000 tons. The number of small operators at a given time varies. The condition of the coal market, availability of coal leases, companies' internal financial situations, ability to obtain coal orders, coal quality, and a variety of other factors can affect a company's coal production. Companies who may not have been eligible at one time may become eligible at some future date and vice versa. However, since the inception of SOAP the percentage of small operators has remained relatively constant.

The Small Operator Assistance Program came into being as a result of the Surface Mining Control and Reclamation Act (SMCRA), Public Law 95-87, which took effect on August 23, 1977. This federal law was designed to regulate the nation's coal industry. With this new federal law came many new requirements not previously addressed under existing state law. Prior to this law there was nothing in the permitting process that called for hydrologic/geologic studies to be performed on areas intended for mining. Such studies were one of the law's new requirements. The coal-permit application now required a determination of what the probable hydrologic consequences would be to the hydrologic regime of the proposed mining areas from the mining and reclamation operation. Criteria were established requiring specific sampling of surface- and ground-water locations and of the geologic strata of the proposed mining area. From the analysis of these samples and from other testing and background research of the hydrology and geology of the area the determination is made. Also included in SMCRA was language creating the Small Operator Assistance Program. The feeling was that these hydrologic/geologic studies could be cost prohibitive to small coal operators. In retrospect these studies have indeed been a significant cost factor for small operators in the permit-application process. Funding for SOAP comes from the federal Abandoned Mine Reclamation Fund, which is supported by reclamation fees levied on coal operators. Surface-mined coal is taxed at the rate of 35 cents per ton, and coal produced by underground mining methods is taxed at the rate of 15 cents per ton. State SOAPs receive money from this fund through grants from the Office of Surface Mining Reclamation and Enforcement, which is the federal agency created to administer the federal law. The hydrologic/geologic studies are funded from these grants.

### ROLE OF SOAP

Specifically, the Small Operator Assistance Program provides for:

> the determination of the probable hydrologic consequences of mining and reclamation under division (B)(2)(k) of section 1513.07 of the Revised Code; and the statement of physical and chemical analyses of test boring or core samples, under division (B)(2)(o) of section 1513.07 of the Revised Code.

Work performed under these two sections constitutes the hydrologic/geologic study, which is a major portion of a coal-mining permit application. To receive assistance from SOAP for these studies a coal operator submits an application to the Ohio Department of Natural Resources, Division of Reclamation, Small Operator Assistance Program. The first step is to establish eligibility of the applicant. An applicant is eligible for assistance if the company does not, or can provide sufficient evidence that the company will not, produce more than 100,000 tons of coal in any consecutive 12-month period from all of the company's mining operations for the producing life of the proposed mining area for which the SOAP application is being submitted, and if the Chief of the Division of Reclamation does not have information readily available that would preclude the applicant from obtaining a coal-mining permit. In cases where there is some form of joint ownership or control involving other coal companies, the following criteria apply when determining coal production tonnage as it pertains to establishing the 100,000-ton eligibility figure:

- The pro rata share, based upon percentage of ownership of applicant, of coal produced by operations in which the applicant owns more than a five percent interest;
- The pro rata share, based upon percentage of beneficial ownership of applicant, of coal produced in other operations by persons who own more than five percent of the applicant's operation;
- All coal produced by operations owned by persons who directly or indirectly control the applicant by reason of direction of the management;
- All coal produced by operations owned by members of the applicant's family and the applicant's

unless it is established that there is no direct or indirect business relationship between or among them; and

An applicant is not eligible if he organizes or reorganizes his company solely for the purpose of obtaining assistance under this rule.

Coal production from companies operating under an industrial minerals permit is not included when establishing the coal production tonnage, as these operations are not regulated by SMCRA. An industrial minerals permit is used when a company predominantly produces minerals other than coal. When a company operates under an industrial minerals permit, coal production cannot exceed one-sixth of all minerals produced from that mining operation.

If the applicant meets these eligibility requirements a SOAP project is developed.

## PROJECT DEVELOPMENT

The hydrologic/geologic SOAP studies are performed by consulting firms. In order for a consultant to be considered for a SOAP project the firm must meet established SOAP requirements and be on the list of approved SOAP consultants maintained by the Division of Reclamation Small Operator Assistance Program. In the SOAP application the operator lists three consulting firms from the list of approved SOAP consultants, in the applicant's order of preference, that he wants to be considered to perform the study. A map of the proposed mining area is submitted with the SOAP application and a field review of the area is conducted. From the field review a price figure that can be paid for the study is established. A contract is developed with the first consultant to accept the study at the established price based on the applicant's order of preference of consultants listed in the SOAP application. The consultant performs the study, which is submitted as part of the coal permit application. Payment is made to the consultant at the time the coal permit application is received. If the SOAP applicant fails to secure a permit and begin mining on the proposed area he may be required to reimburse the Division of Reclamation for the money that was paid for the study. If good faith by the applicant can be established, the Chief of the Division of Reclamation can waive this reimbursement requirement. If the applicant exceeds 100,000 tons of coal production from all mining operations in any consecutive 12-month period for the producing life of the mining area for which SOAP assistance was received, the operator must reimburse the money.

## SOAP PARTICIPATION

When applying for coal permits, 85 to 90 percent of Ohio's small coal operators routinely use SOAP. There are key factors, however, that are essential for a successful program of this type.

1. Timeliness.

   Time is valuable to a coal operator. Regardless of the benefits SOAP might provide, if the processing time for the development of a SOAP project is excessive, operators will not utilize the program. Long time delays can be more costly than the money lost from not utilizing SOAP.

2. Ease of use.

   The program should be easy to use. Companies will be hesitant to use a program that involves excessive "red tape." Program requirements must be met, but the process should be as streamlined as possible to encourage participation.

3. Good communication.

   With a governmental program of this type it is essential to have good communication with the coal industry in general and particularly with the small coal companies. The initial reaction to this type of program is hesitation, suspicion, and uncertainty, and at the outset it was difficult convincing companies to use the program even though it was designed for their benefit. Through good communication and education these barriers were removed and operators began regularly using SOAP.

## CONCLUSION

Ohio's Small Operator Assistance Program has been very successful in fulfilling its purpose in that it has reached the majority of companies in the coal industry that it was designed to assist. It is a very streamlined and workable program that has been well accepted. Considering the depressed coal market that has existed for a number of years, it has been very difficult for many small coal operators to compete and survive. Most small coal companies operate on the spot coal market and cannot rely on long-term contracts. Orders and prices can fluctuate overnight, a situation which can devastate companies' internal financial situations. A program of this type offers some measure of relief in a difficult and constantly changing coal market.

## 1988 OHIO MINING ACTIVITIES IN BRIEF

Reports were filed in 1988 for 383 coal-mining operations, of which 285 reported coal production. Reports also were filed for 56 coal-washing plants and associated facilities. Of 503 industrial-mineral-mining operations filing reports in 1988, 430 operations reported production. There were 17 mines reporting production of coal and one or more industrial minerals and 39 mines reporting production of multiple industrial minerals (including those mines producing coal and industrial minerals). There were 1,117 new wells completed for oil and gas in 1988, of which 998 were productive and 119 were dry.

The total value[1] of coal was $933,021,992 in 1988; the value of oil and gas was $603,188,640; and the total value[1] of all nonfuel industrial minerals was $382,939,819 in 1988.

[1]Includes reported and estimated values. Some operations reporting sales did not report a value for those sales. A statewide average price per ton was calculated for each industrial mineral commodity based on sales for which the value was reported. A countywide average price per ton was calculated for coal based on sales for which the value was reported and method of production. These calculated averages were used to estimate the value of the sales for which the actual values were not reported.

TABLE 1.—*1988 Mineral sales and production in Ohio*

| Commodity | Production[1] | Sales[2] |
|---|---|---|
| Coal | 31,164,003 tons | 31,398,425 tons |
| Limestone and dolomite | 45,525,405 tons | 45,689,233 tons |
| Sand and gravel | 43,585,118 tons | 42,414,408 tons |
| Salt | 3,692,330 tons | 3,730,498 tons |
| Sandstone and conglomerate | 1,973,306 tons | 1,806,646 tons |
| Clay | 2,184,592 tons | 1,902,178 tons |
| Shale | 2,213,039 tons | 2,209,314 tons |
| Gypsum | 239,828 tons | 239,828 tons |
| Peat | 33,181 tons | 24,577 tons |
| Gas | 166,690,130 MCF[3] | [4] |
| Oil | 11,710,728 barrels | [4] |

[1]The production figures for the industrial minerals are estimates. Many operators do not know actual production. Some operators report estimates, other operators do not report any production. For those operators who do not report production, production is assumed to equal sales.
[2]Includes material for captive use.
[3]Thousand cubic feet.
[4]Figure not available.

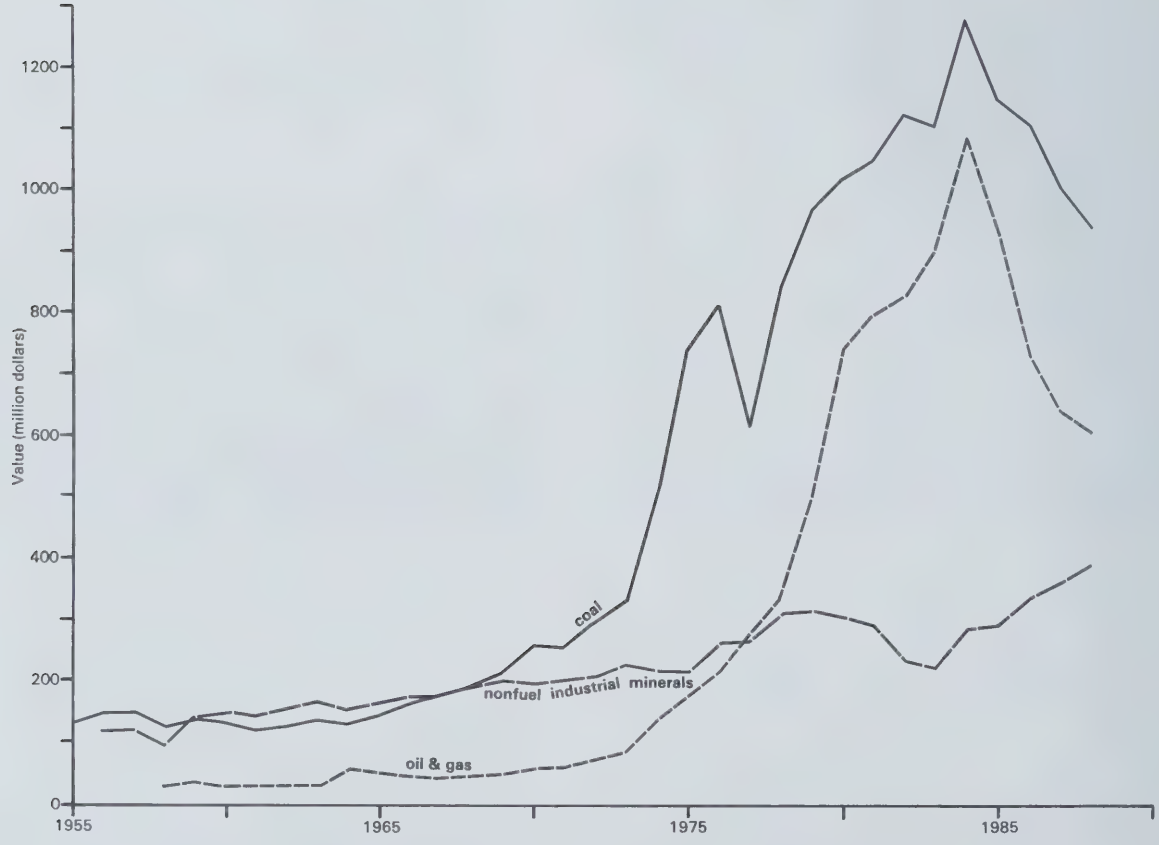


FIGURE 1.—Value of coal, nonfuel minerals, and oil and gas in Ohio.

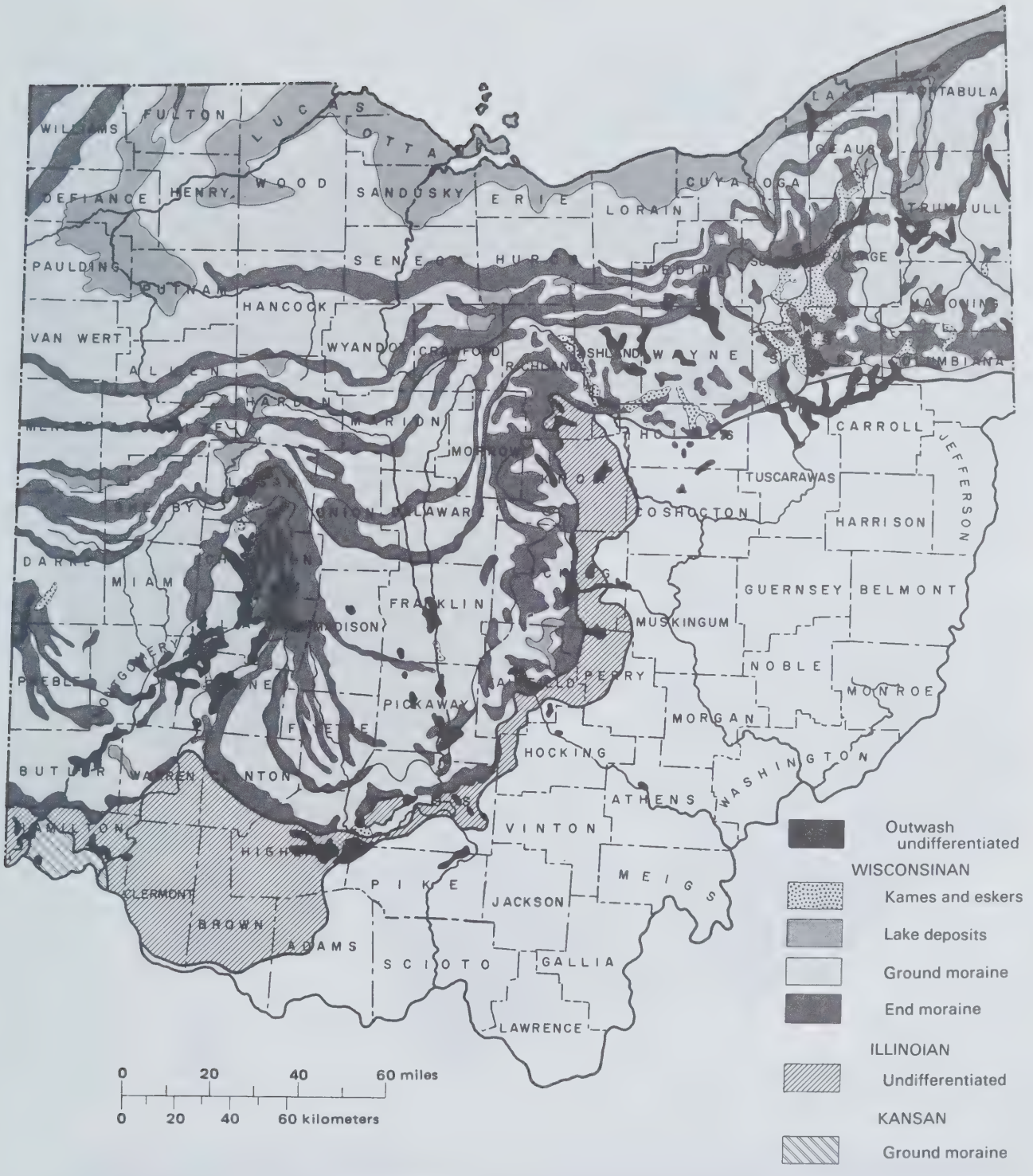


FIGURE 2.—Generalized map of the glacial deposits of Ohio. Continental glaciers advanced over the Ohio landscape several times during the Ice Age. These glaciers deposited unconsolidated materials on top of the bedrock over nearly two-thirds of the state. Most of Ohio's sand and gravel production comes from kames, eskers, and outwash, which were deposited by meltwater from the glaciers. Other glacially derived industrial minerals in Ohio include peat and clay.

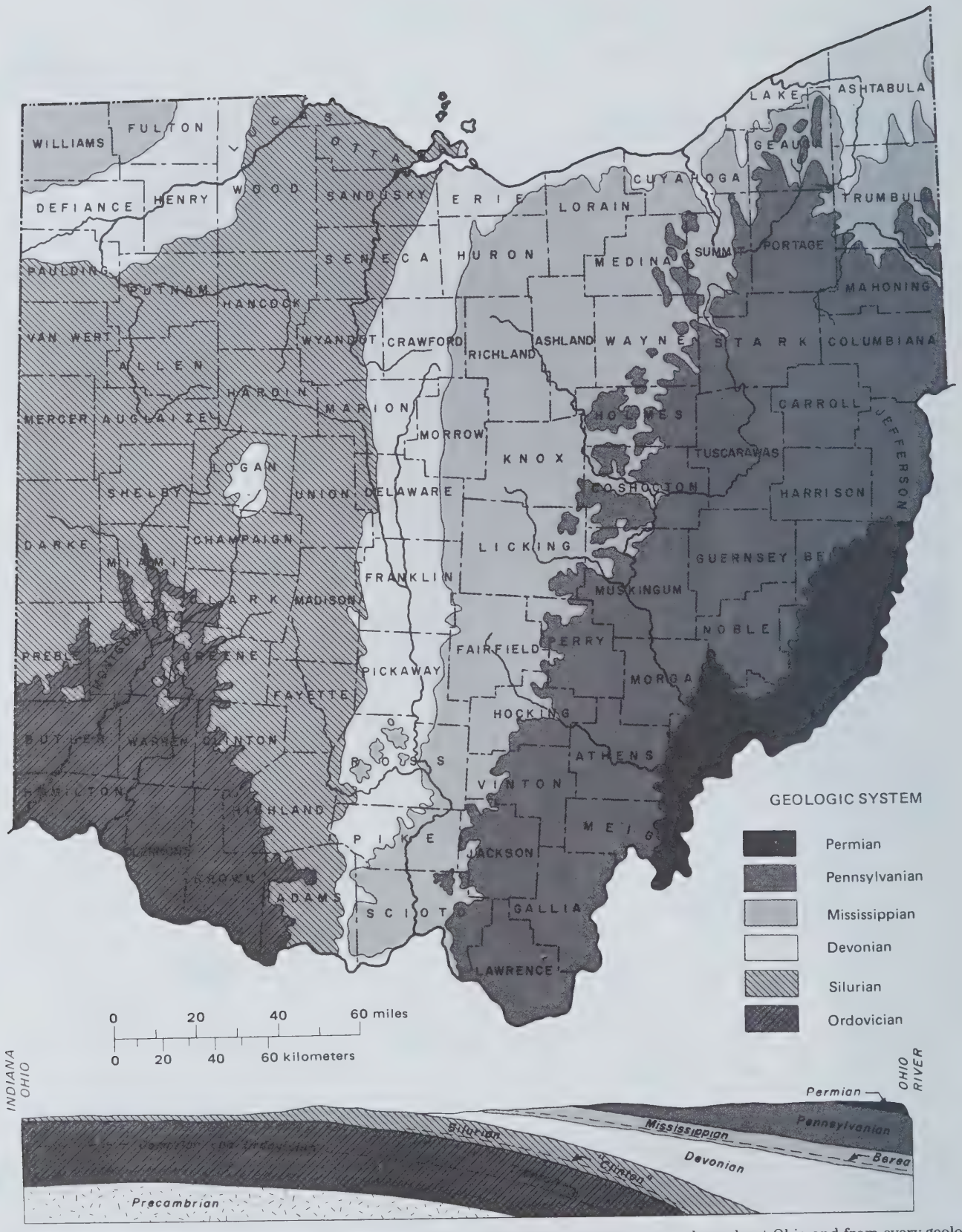


FIGURE 3.—Generalized geologic map and cross section of Ohio. Mineral production occurs throughout Ohio and from every geologic system from the Cambrian to the Permian. Coal, limestone and dolomite, sandstone and conglomerate, shale, clay, gypsum, salt, and oil and gas are produced from Ohio bedrock.

## COAL

Coal was produced by 115 companies at 285 mines in 24 Ohio counties during 1988. Production decreased 6.0 percent from 1987, totalling 31,164,003 tons in 1988, with 19,994,998 tons (64.2 percent of total production) produced at 273 surface mines, and 11,169,005 tons (35.8 percent of total production) produced at 12 underground mines. In comparison to 1987, there were 11 fewer mines reporting production of 50,000 tons or less, 3 more mines producing between 50,000 and 500,000 tons, 1 fewer mine producing between 500,000 and 1,000,000 tons, and the same number of mines reporting production of 1,000,000 tons or greater; there was a net decrease of 9 mines in 1988.

The five leading counties for 1988 production were Belmont, Meigs, Noble, Monroe, and Harrison Counties; these counties produced 54.9 percent of the 1988 total production. A total of 31,398,425 tons of coal were sold in 1988, with a total value[2] of $933,021,992. The average price per ton of all coal sold was $29.72; surface-mined coal averaged $26.18 per ton and underground-mined coal averaged $36.09.

In underground mining, 53.5 percent of the coal was mined by continuous miner and 46.5 percent was produced by longwall mining; no coal was produced by conventional mining in Ohio in 1988. In surface operations, 4.1 percent of the coal produced was auger mined, and the remainder was strip mined.

The Pittsburgh (No. 8) coal was the most heavily mined seam, followed by the Meigs Creek (No. 9), Clarion (No. 4A), Middle Kittanning (No. 6), and Lower Kittanning (No. 5) seams. Coal produced from these five seams made up 81.2 percent of the total 1988 production.

A total of 23,585,855 tons of washed coal were reported in 1988. Reports from 24 coal-washing plants indicate an average 31.5 percent loss in washing.

Trucking was the primary means of coal disposition, carrying 50.2 percent of the total sales. Conveyor belts carried 24.8 percent, water transport carried 16.9 percent, and rail transported 8.1 percent of the coal sold in 1988; less than 1 percent was handled by other undesignated means. A total of 1.1 percent of the coal produced was reported as stored.

The total average annual employment reported in 1988 was 6,697 employees, 4,073 of whom were production employees. The average annual wage earned by all production employees was $33,834, based on those employees for whom wages were reported. The average annual wage for surface-mine production employees was $31,436, and the average annual wage for underground-mine production employees was $37,141. Wages earned by all employees totalled $237,432,366 in 1988.

[2]Includes reported and estimated values. See footnote 1, p. 8.

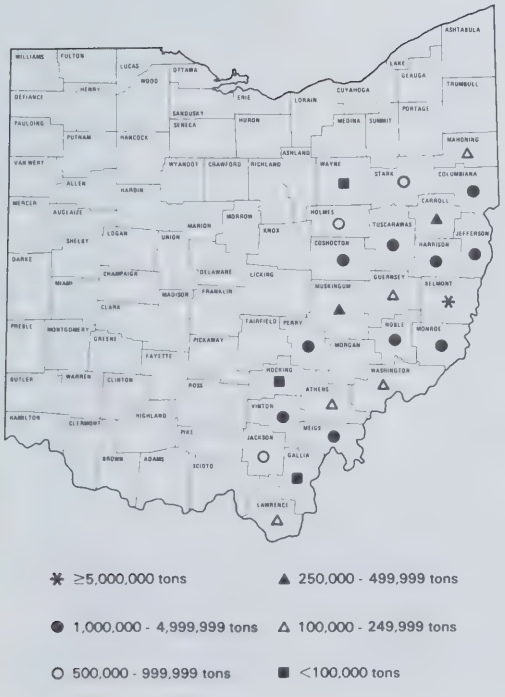


FIGURE 4.—Coal sales in Ohio in 1988, by county.

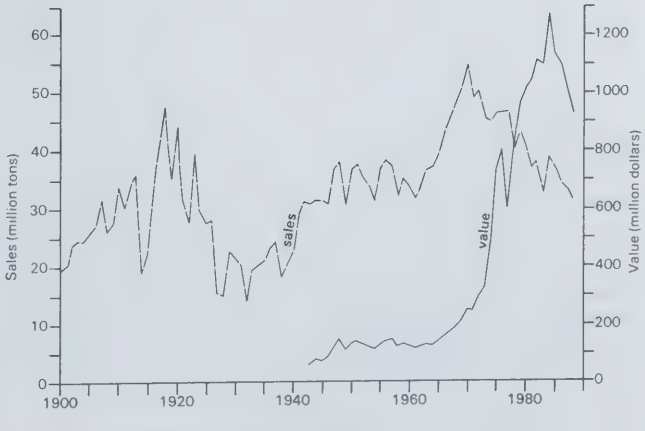


FIGURE 5.—Sales and value of coal in Ohio.

TABLE 2.—*1988 Ohio coal production by production-size group and change from 1987*

| Production-size group | 1988 | | Change from 1987 (short tons) |
|---|---|---|---|
| | Number of mines reporting | Production (short tons) | |
| Under 25,000 tons | 131 | 1,463,319 | +329,587 |
| 25,000 to 49,999 tons | 42 | 1,553,994 | -776,733 |
| 50,000 to 99,999 tons | 53 | 3,569,471 | +633,595 |
| 100,000 to 249,999 tons | 36 | 5,578,970 | -1,895,765 |
| 250,000 to 499,999 tons | 12 | 3,690,988 | +81,536 |
| 500,000 to 999,999 tons | 7 | 5,248,947 | -965,747 |
| 1,000,000 tons and over | 4 | 10,058,314 | +605,214 |
| TOTAL | 285 | 31,164,003 | -1,988,313 |

TABLE 3.—*1988 Ohio coal production by county and mining method*

| County[1] | All methods (short tons) | Underground | | | | | Surface | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Number of mines reporting | Production (short tons) | | | | Number of mines reporting | Production (short tons) | | |
| | | | Total | Longwall | Conventional | Continuous miner | | Total | Strip | Auger |
| Athens | 137,236 | | | | | | 2 | 137,236 | 137,236 | |
| Belmont | 5,155,456 | 2[2] | 1,867,191 | 273,872 | | 1,593,319 | 50[2] | 3,288,265 | 3,036,394 | 251,871 |
| Carroll | 496,860 | | | | | | 16 | 496,860 | 472,609 | 24,251 |
| Columbiana | 1,182,310 | 1 | 581,125 | | | 581,125 | 27 | 601,185 | 549,579 | 51,606 |
| Coshocton | 1,508,920 | | | | | | 14 | 1,508,920 | 1,491,448 | 17,472 |
| Gallia | 2,891 | | | | | | 1 | 2,891 | 2,891 | |
| Guernsey | 165,193 | | | | | | 1[2] | 165,193 | 158,747 | 6,446 |
| Harrison | 2,146,114 | 1 | 466,388 | 451,852 | | 14,536 | 18 | 1,679,726 | 1,650,921 | 28,805 |
| Hocking | 88,932 | | | | | | 5 | 88,932 | 88,932 | |
| Holmes | 561,871 | | | | | | 9 | 561,871 | 561,871 | |
| Jackson | 962,102 | 1 | 53,913 | | | 53,913 | 8 | 908,189 | 908,189 | |
| Jefferson | 1,940,009 | | | | | | 19 | 1,940,009 | 1,869,024 | 70,985 |
| Lawrence | 110,031 | | | | | | 3 | 110,031 | 110,031 | |
| Mahoning | 183,382 | | | | | | 3 | 183,382 | 170,072 | 13,310 |
| Meigs | 4,064,953 | 2 | 4,064,953 | 2,444,833 | | 1,620,120 | | | | |
| Monroe | 2,283,919 | 1 | 2,283,919 | 2,026,392 | | 257,527 | | | | |
| Muskingum | 475,800 | 1 | 24,521 | | | 24,521 | 2[2] | 451,279 | 422,302 | 28,977 |
| Noble | 3,470,317 | | | | | | 7 | 3,470,317 | 3,373,104 | 97,213 |
| Perry | 1,355,728 | 2 | 937,481 | | | 937,481 | 6 | 418,247 | 418,247 | |
| Stark | 506,183 | | | | | | 13 | 506,183 | 500,882 | 5,301 |
| Tuscarawas | 2,082,623 | | | | | | 51 | 2,082,623 | 1,866,798 | 215,825 |
| Vinton | 2,106,878 | 1 | 889,514 | | | 889,514 | 15 | 1,217,364 | 1,217,364 | |
| Washington | 159,730 | | | | | | 3 | 159,730 | 159,730 | |
| Wayne | 16,565 | | | | | | 1[3] | 16,565 | 16,565 | |
| TOTAL | 31,164,003 | 12 | 11,169,005 | 5,196,949 | 0 | 5,972,056 | 273 | 19,994,998 | 19,182,936 | 812,062 |

[1]Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.
[2]Does not include mines extending into this county from adjoining counties.
[3]This mine extends into Wayne County from Holmes County and is not included in the total number of mines.

TABLE 4.—*1988 Ohio coal production by county and month*

| County[1] | Production (short tons) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total annual | January | February | March | April | May | June | July | August | September | October | November | December |
| Athens | 137,236 | 19,393 | 8,798 | 12,627 | 10,343 | 14,217 | 7,139 | 8,934 | 8,197 | 10,659 | 12,709 | 10,397 | 13,823 |
| Belmont | 5,155,456 | 519,538 | 431,741 | 398,212 | 406,729 | 477,952 | 484,799 | 358,425 | 465,310 | 439,998 | 418,743 | 382,854 | 371,155 |
| Carroll | 496,860 | 32,788 | 42,981 | 32,641 | 37,498 | 31,629 | 36,607 | 37,501 | 41,641 | 42,558 | 54,865 | 46,194 | 59,957 |
| Columbiana | 1,182,310 | 99,013 | 93,364 | 109,066 | 88,143 | 95,384 | 112,942 | 80,362 | 106,568 | 97,525 | 95,980 | 101,585 | 102,378 |
| Coshocton | 1,508,920 | 122,475 | 116,061 | 130,743 | 112,507 | 111,384 | 116,211 | 121,488 | 131,613 | 142,882 | 148,098 | 127,022 | 128,436 |
| Gallia | 2,891 | 2,891 | | | | | | | | | | | |
| Guernsey | 165,193 | 18,465 | 18,580 | 22,503 | 9,171 | 13,440 | 13,982 | 13,385 | 14,059 | 10,300 | 10,016 | 10,237 | 11,055 |
| Harrison | 2,146,114 | 220,207 | 122,742 | 200,157 | 129,989 | 131,705 | 137,195 | 162,174 | 178,342 | 201,714 | 243,296 | 222,352 | 196,241 |
| Hocking | 88,932 | 10,061 | 7,356 | 7,237 | 3,498 | 3,494 | 4,812 | 7,822 | 8,576 | 11,115 | 8,169 | 7,959 | 8,833 |
| Holmes | 561,871 | 61,828 | 59,719 | 56,413 | 55,972 | 38,224 | 47,956 | 37,239 | 35,601 | 29,545 | 46,725 | 44,647 | 48,002 |
| Jackson | 962,102 | 115,191 | 62,046 | 57,249 | 36,193 | 37,699 | 26,399 | 91,930 | 89,828 | 94,327 | 102,133 | 122,926 | 126,181 |
| Jefferson | 1,940,009 | 187,689 | 159,356 | 164,032 | 123,139 | 151,621 | 164,166 | 141,669 | 158,965 | 177,694 | 176,168 | 162,200 | 173,310 |
| Lawrence | 110,031 | 11,229 | 9,038 | 12,091 | 9,387 | 9,388 | 9,388 | 9,431 | 9,753 | 10,261 | 12,408 | 6,078 | 1,579 |
| Mahoning | 183,382 | 21,595 | 18,845 | 25,044 | 20,025 | 14,277 | 15,777 | 5,351 | 13,698 | 9,824 | 9,379 | 14,352 | 15,215 |
| Meigs | 4,064,953 | 391,271 | 372,650 | 398,084 | 344,139 | 280,462 | 270,707 | 196,573 | 387,020 | 294,756 | 400,970 | 350,248 | 378,073 |
| Monroe | 2,283,919 | 195,887 | 212,590 | 194,349 | 200,333 | 169,213 | 218,738 | 155,940 | 175,696 | 204,273 | 210,982 | 174,792 | 171,126 |
| Muskingum | 475,800 | 45,948 | 29,800 | 33,421 | 46,742 | 40,241 | 37,389 | 41,691 | 45,224 | 37,618 | 37,370 | 25,967 | 54,389 |
| Noble | 3,470,317 | 285,578 | 286,237 | 297,895 | 269,873 | 290,305 | 314,501 | 218,859 | 194,648 | 320,810 | 337,963 | 304,842 | 348,806 |
| Perry | 1,355,728 | 119,655 | 105,653 | 114,089 | 101,884 | 99,671 | 81,954 | 134,943 | 150,146 | 126,314 | 123,551 | 107,066 | 90,802 |
| Stark | 506,183 | 66,388 | 51,730 | 54,466 | 47,054 | 43,146 | 50,641 | 34,318 | 36,781 | 42,887 | 43,350 | 21,585 | 13,837 |
| Tuscarawas | 2,082,623 | 175,696 | 158,171 | 185,854 | 194,942 | 170,309 | 172,132 | 179,203 | 175,708 | 168,668 | 156,288 | 174,879 | 170,773 |
| Vinton | 2,106,878 | 215,671 | 176,885 | 208,144 | 160,505 | 179,896 | 184,907 | 140,738 | 195,134 | 171,432 | 158,450 | 149,659 | 165,457 |
| Washington | 159,730 | | 9,057 | 17,328 | 11,533 | 19,215 | 14,449 | 14,032 | 18,847 | 14,206 | 18,167 | 11,120 | 11,776 |
| Wayne | 16,565 | 533 | 1,310 | 1,464 | 1,308 | 1,313 | 1,730 | 1,561 | 1,878 | 950 | 692 | 2,047 | 1,779 |
| TOTAL | 31,164,003 | 2,938,990 | 2,554,710 | 2,733,109 | 2,420,907 | 2,424,185 | 2,524,521 | 2,193,569 | 2,643,233 | 2,660,316 | 2,826,472 | 2,581,008 | 2,662,983 |

[1]Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.

Longwall mining at Southern Ohio Coal Co. Meigs No. 2 mine, Meigs County.

TABLE 5.—*1988 Ohio coal production*

| County[1] | Production | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Sharon (No. 1) | Lower Mercer (No. 3) | Upper Mercer (No. 3A) | Tionesta (No. 3B) | Brookville (No. 4) | Winters | Clarion (No. 4A) | Lower Kittanning (No. 5) | Strasburg (No. 5A) | Middle Kittanning (No. 6) | |
| Athens | 137,236 | | | | | | | | | | 67,437 | |
| Belmont | 5,155,456 | | | | | | | | | | | |
| Carroll | 496,860 | | | | | | | | 74,453 | | 240,770 | |
| Columbiana | 1,182,310 | | | | | 111,193 | | | 1,859 | | 244,164 | |
| Coshocton | 1,508,920 | | | | | | | | 763,838 | | 745,082 | |
| Gallia | 2,891 | | | | | | | | | | 2,891 | |
| Guernsey | 165,193 | | | | | | | | | | 23,674 | |
| Harrison | 2,146,114 | | | | | | | | | | | |
| Hocking | 88,932 | | | | | | | | 4,626 | | 43,409 | |
| Holmes | 561,871 | | 18,366 | | | 45,553 | | | 254,631 | | 243,321 | |
| Jackson | 962,102 | 122,831 | 3,969 | | | 45,911 | 18,018 | 355,794 | 367,010 | | 37,505 | |
| Jefferson | 1,940,009 | | | | | | | | | | | |
| Lawrence | 110,031 | | | | | 31,154 | | 52,389 | 26,488 | | | |
| Mahoning | 183,382 | | | | | 142,172 | | | 41,210 | | | |
| Meigs | 4,064,953 | | | | | | | 4,064,953 | | | | |
| Monroe | 2,283,919 | | | | | | | | | | | |
| Muskingum | 475,800 | | | | | | | | | | 84,362 | |
| Noble | 3,470,317 | | | | | | | | | | | |
| Perry | 1,355,728 | | | | | | | | 61,714 | | 1,224,858 | |
| Stark | 506,183 | | | | | 134,545 | | | 193,490 | 12,413 | 165,735 | |
| Tuscarawas | 2,082,623 | | 9,252 | 189,614 | 905 | 85,485 | | | 401,622 | 30,541 | 781,633 | |
| Vinton | 2,106,878 | | 96,760 | | | 363,669 | 103,143 | 1,053,497 | 390,539 | 11,107 | 74,708 | |
| Washington | 159,730 | | | | | | | | | | | |
| Wayne | 16,565 | | | | | 16,565 | | | | | | |
| TOTAL | 31,164,003 | 122,831 | 128,347 | 189,614 | 905 | 976,247 | 121,161 | 5,526,633 | 2,581,480 | 54,061 | 3,979,549 | |

[1]Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.

"Big Muskie" dragline at Central Ohio Coal Co. Muskingum mine, Muskingum and Noble Counties.

*by county and seam*

(short tons)

| Lower Freeport (No. 6A) | Upper Freeport (No. 7) | Mahoning (No. 7A) | Harlem | Pittsburgh (No. 8) | Pomeroy-Redstone (No. 8A) | Meigs Creek (No. 9) | Waynesburg (No. 11) | Washington (No. 12) |
|---|---|---|---|---|---|---|---|---|
| 67,438 | 2,361 | | | 2,243,423 | 1,338 | 1,451,362 | 1,327,322 | 132,011 |
| 13,581 | 30,481 | 24,410 | 110,358 | 2,807 | | | | |
| 612,578 | 206,282 | 6,234 | | | | | | |
| | 120,133 | | | 647 | 20,739 | | | |
| | 58,167 | | 156,421 | 1,467,048 | 240,184 | 141,401 | 82,893 | |
| 34,222 | 6,675 | | | | | | | |
| 2,249 | 8,815 | | | | | | | |
| | | | | 1,600,901 | 319,234 | | 19,874 | |
| | | | | 2,283,919 | | | | |
| | | | | | | 391,438 | | |
| | | | | | | 3,470,317 | | |
| | 69,156 | | | | | | | |
| 58,882 | 524,689 | | | | | | | |
| 12,830 | 625 | | | | | | | |
| | | | | | | 159,730 | | |
| 801,780 | 1,027,384 | 30,644 | 266,779 | 7,598,745 | 581,495 | 5,614,248 | 1,430,089 | 132,011 |

Loading a 160-ton coal hauler at Central Ohio Coal Co. Muskingum mine, Muskingum and Noble Counties.

TABLE 6.—*1988 Disposition of Ohio coal, by county*

| County[1] | Number of mines | Disposition[1] (short tons) | | | | | | Stored |
|---|---|---|---|---|---|---|---|---|
| | | Total[2] | Rail | Water | Truck | Conveyor | Unspecified/ other | |
| Athens | 2 | 137,236 | | | 137,236 | | | |
| Belmont | 51[3] | 5,150,645 | 1,475,012 | 1,907,488 | 1,767,867 | 257 | 21 | 165,826 |
| Carroll | 16 | 496,858 | | | 496,858 | | | |
| Columbiana | 28 | 1,185,073 | | 4,854 | 1,180,219 | | | |
| Coshocton | 14 | 1,554,859 | 2 | 114,639 | 1,074,417 | 365,801 | | 10,797 |
| Gallia | 1 | 2,891 | | | 2,891 | | | |
| Guernsey | 1[3] | 167,493 | 499 | 22,965 | 144,029 | | | 642 |
| Harrison | 19 | 2,106,525 | 5,237 | 829,781 | 1,257,881 | 13,626 | | 62,811 |
| Hocking | 5 | 88,932 | | 46,523 | 42,409 | | | |
| Holmes | 9 | 561,871 | | | 561,871 | | | |
| Jackson | 9 | 962,102 | | 16,183 | 945,919 | | | |
| Jefferson | 19 | 1,943,445 | 1,660 | 263,365 | 1,678,420 | | | 12,436 |
| Lawrence | 3 | 110,031 | | 97,381 | 12,650 | | | |
| Mahoning | 3 | 189,523 | | | 189,523 | | | 8,975 |
| Meigs | 2 | 4,093,772 | | | | 4,093,772 | | 27,798 |
| Monroe | 1 | 2,283,919 | | 1,748,010 | 535,909 | | | |
| Muskingum | 3[3] | 475,800 | | | 188,277 | 287,523 | | |
| Noble | 7 | 3,469,998 | | 80,171 | 380,731 | 3,009,075 | 21 | 461 |
| Perry | 8 | 1,467,388 | 146,383 | | 1,321,005 | | | 27,701 |
| Stark | 13 | 505,740 | | | 505,740 | | | |
| Tuscarawas | 51 | 2,159,953 | 24,522 | 131,053 | 1,993,538 | 10,840 | | 22,159 |
| Vinton | 16 | 2,108,076 | 890,712 | 33,228 | 1,184,136 | | | 2,268 |
| Washington | 3 | 159,730 | | | 159,730 | | | |
| Wayne | 1[4] | 16,565 | | | 16,565 | | | |
| TOTAL | 284 | 31,398,425 | 2,544,027 | 5,295,641 | 15,777,821 | 7,780,894 | 42 | 341,874 |

[1]Tonnage of coal shipped from mines operating in more than one county was evenly split between the counties involved and type(s) of disposition reported unless a by-county breakdown was provided by the operator.
[2]Does not reflect tonnage stored. Reflects tonnage sold and shipped from mine.
[3]Does not include mines extending into this county from adjoining counties.
[4]This mine extends into Wayne County from Holmes County and is not included in the total number of mines.

TABLE 7.—*1988 Rail shipments of Ohio coal, by county of origin and carrier*

| County[1] | Number of mines | Shipments[1] (short tons) | | | | |
|---|---|---|---|---|---|---|
| | | Total | Conrail | B & O | N & W | C & O |
| Belmont | 14 | 1,475,012 | 1,101,932 | 11,445 | 361,635 | |
| Coshocton | 1 | 2 | 2 | | | |
| Guernsey | 1[2] | 499 | 499 | | | |
| Harrison | 8 | 5,237 | 5,237 | | | |
| Jefferson | 4 | 1,660 | 1,660 | | | |
| Perry | 2 | 146,383 | 146,383 | | | |
| Tuscarawas | 4 | 24,522 | 638 | | 23,884 | |
| Vinton | 1 | 890,712 | | | | 890,712 |
| TOTAL | 34 | 2,544,027 | 1,256,351 | 11,445 | 385,519 | 890,712 |

[1]Tonnage of coal shipped from mines operating in more than one county was evenly split between the counties involved and the carriers reported unless a by-county breakdown was provided by the operator.
[2]This mine extends into Guernsey County from Belmont County and is not included in the total number of mines.

TABLE 8.—*1988 Washed Ohio coal*

| | | Raw coal (short tons) | Washed coal (short tons) | Loss in washing (short tons) | Loss in washing (percent) | Percent of all washed coals |
|---|---|---|---|---|---|---|
| By type of mining | From surface mines | 15,959,952[1] | 13,017,296 | 2,942,656 | 18.4 | 55.2 |
| | From underground mines | 18,491,801[1] | 10,568,559[1] | 7,923,242 | 42.8 | 44.8 |
| | TOTAL | 34,451,753 | 23,585,855[2] | 10,865,898 | 31.5 | 100.0 |
| By seam | Lower Mercer (No. 3A) | 39,854 | 32,906 | 6,948 | 17.4 | 0.2 |
| | Brookville (No. 4) | 2,209,296[1] | 1,941,851[1] | 267,445 | 12.1 | 8.2 |
| | Winters | 84,877 | 61,781 | 23,096 | 27.2 | 0.3 |
| | Clarion (No. 4A) | 9,348,930[1] | 5,221,607 | 4,127,323 | 44.1 | 22.1 |
| | Lower Kittanning (No. 5) | 845,763[1] | 667,028[1] | 178,735 | 21.1 | 2.8 |
| | Middle Kittanning (No. 6) | 2,337,060[1] | 1,558,166[1] | 778,894 | 33.3 | 6.6 |
| | Lower Freeport (No. 6A) | 115,143 | 93,519 | 21,624 | 18.8 | 0.4 |
| | Upper Freeport (No. 7) | 248,200[1] | 198,283[1] | 49,917 | 20.1 | 0.9 |
| | Mahoning (No. 7A) | 7,602 | 6,234 | 1,368 | 18.0 | <0.1 |
| | Harlem | 38,282 | 31,391 | 6,891 | 18.0 | 0.1 |
| | Pittsburgh (No. 8) | 9,001,566[1] | 5,477,764[1] | 3,523,802 | 39.1 | 23.2 |
| | Pomeroy-Redstone (No. 8A) | 374,069 | 299,790 | 74,279 | 19.9 | 1.3 |
| | Meigs Creek (No. 9) | 5,656,534 | 4,573,987[1] | 1,082,547 | 19.1 | 19.4 |
| | Waynesburg (No. 11) | 1,732,306[1] | 1,371,575 | 360,731 | 20.8 | 5.8 |
| | Washington (No. 12) | 134,277[1] | 108,243 | 26,034 | 19.4 | 0.5 |
| | Other[3] | 2,277,994[1] | 1,941,730 | 336,264 | 14.8 | 8.2 |
| | TOTAL | 34,451,753 | 23,585,855[2] | 10,865,898 | 31.5 | 100.0 |

[1]The raw tonnage (before washing) and/or the clean tonnage (after washing) of coal was estimated for those mines which failed to report this information. These estimates were calculated using a statewide-average loss-in-washing percentage based on raw/washed coal values for type of mining and for seam deemed to be reliable.
[2]These figures reflect total washed coal in 1988 and do not necessarily reflect only 1988 production. In 1988, 34.2% of the total production was reported as unwashed. Coal not designated as washed or unwashed was assumed to be unwashed.
[3]Unspecified tonnages of seams listed above.

TABLE 9.—*1988 Dollar value of coal at mine by county and mining method*

| County[1] | Surface | | | | Underground | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. of mines | Tonnage sold (short tons) | Value at mine[2] (dollars) | Per ton average (dollars) | No. of mines | Tonnage sold (short tons) | Value at mine[2] (dollars) | Per ton average (dollars) | No. of mines | Tonnage sold (short tons) | Value at mine[2] (dollars) | Per ton average (dollars) |
| Athens | 2 | 137,236 | $3,380,128 | $24.63 | | | | | 2 | 137,236 | $3,380,128 | $24.63 |
| Belmont | 49[3] | 3,278,534 | 100,351,227 | 30.61 | 2[3] | 1,872,111 | $62,439,473 | $33.35 | 51[3] | 5,150,645 | 162,790,700 | 31.61 |
| Carroll | 16 | 496,858 | 9,673,020 | 19.47 | | | | | 16 | 496,858 | 9,673,020 | 19.47 |
| Columbiana | 27 | 603,948 | 13,773,300 | 22.81 | 1 | 581,125 | 8,291,848 | 14.27 | 28 | 1,185,073 | 22,065,148 | 18.62 |
| Coshocton | 14 | 1,554,859 | 49,810,796 | 32.04 | | | | | 14 | 1,554,859 | 49,810,796 | 32.04 |
| Gallia | 1 | 2,891 | 39,668 | 13.72 | | | | | 1 | 2,891 | 39,668 | 13.72 |
| Guernsey | 1[3] | 167,493 | 5,614,307 | 33.52 | | | | | 1[3] | 167,493 | 5,614,307 | 33.52 |
| Harrison | 18 | 1,640,137 | 50,627,564 | 30.87 | 1 | 466,388 | 11,909,923 | 25.54 | 19 | 2,106,525 | 62,537,487 | 29.69 |
| Hocking | 5 | 88,932 | 1,471,845 | 16.55 | | | | | 5 | 88,932 | 1,471,845 | 16.55 |
| Holmes | 9 | 561,871 | 9,710,539 | 17.28 | | | | | 9 | 561,871 | 9,710,539 | 17.28 |
| Jackson | 8 | 908,189 | 16,577,036 | 18.25 | 1 | 53,913 | 679,352 | 12.60 | 9 | 962,102 | 17,256,388 | 17.94 |
| Jefferson | 19 | 1,943,445 | 49,519,758 | 25.48 | | | | | 19 | 1,943,445 | 49,519,758 | 25.48 |
| Lawrence | 3 | 110,031 | 1,297,489 | 11.79 | | | | | 3 | 110,031 | 1,297,489 | 11.79 |
| Mahoning | 3 | 189,523 | 5,908,609 | 31.18 | | | | | 3 | 189,523 | 5,908,609 | 31.18 |
| Meigs | | | | | 2 | 4,093,772 | 171,875,598 | 41.98 | 2 | 4,093,772 | 171,875,598 | 41.98 |
| Monroe | | | | | 1 | 2,283,919 | 83,291,688 | 36.47 | 1 | 2,283,919 | 83,291,688 | 36.47 |
| Muskingum | 2[3] | 451,279 | 15,722,860 | 34.84 | 1 | 24,521 | 294,259 | 12.00 | 3[3] | 475,800 | 16,017,119 | 33.66 |
| Noble | 7 | 3,469,998 | 122,695,896 | 35.36 | | | | | 7 | 3,469,998 | 122,695,896 | 35.36 |
| Perry | 6 | 527,208 | 8,815,284 | 16.72 | 2 | 940,180 | 28,204,572 | 30.00 | 8 | 1,467,388 | 37,019,856 | 25.23 |
| Stark | 13 | 505,740 | 8,449,930 | 16.71 | | | | | 13 | 505,740 | 8,449,930 | 16.71 |
| Tuscarawas | 51 | 2,159,953 | 36,026,368 | 16.68 | | | | | 51 | 2,159,953 | 36,026,368 | 16.68 |
| Vinton | 15 | 1,217,364 | 16,217,125 | 13.32 | 1 | 890,712 | 37,514,822 | 42.12 | 16 | 2,108,076 | 53,731,947 | 25.49 |
| Washington | 3 | 159,730 | 2,623,864 | 16.43 | | | | | 3 | 159,730 | 2,623,864 | 16.43 |
| Wayne | 1[4] | 16,565 | 213,844 | 12.91 | | | | | 1[4] | 16,565 | 213,844 | 12.91 |
| TOTAL | 272 | 20,191,784 | $528,520,457 | $26.18 | 12 | 11,206,641 | $404,501,535 | $36.09 | 284 | 31,398,425 | $933,021,992 | $29.72 |

[1]Sales reported from mines operating in more than one county were evenly split between the counties involved unless a by-county breakdown was provided by the operator.
[2]The FOB value of coal sold was estimated for those mines which failed to report this information. These estimates were calculated using a countywide average price per ton by mining method based on reported FOB values deemed to be reliable.
[3]Does not include mines extending into this county from adjoining counties.
[4]This mine extends into Wayne County from Holmes County and is not included in the total number of mines.

TABLE 10.—*1988 Ohio coal-mine employment[1], by occupational group and month*

| Occupational group | Number of employees | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Monthly average | January | February | March | April | May | June | July | August | September | October | November | December |
| All production workers | 4,073 | 4,234 | 4,114 | 4,006 | 4,149 | 4,110 | 4,097 | 4,077 | 4,098 | 4,047 | 4,018 | 3,974 | 3,937 |
| Underground mines | | | | | | | | | | | | | |
| Tonnage employees | 316 | 312 | 284 | 250 | 270 | 273 | 289 | 346 | 350 | 358 | 348 | 354 | 353 |
| Underground production employees | 1,357 | 1,394 | 1,373 | 1,346 | 1,382 | 1,393 | 1,392 | 1,334 | 1,340 | 1,347 | 1,330 | 1,328 | 1,329 |
| Surface production employees | 39 | 33 | 33 | 31 | 38 | 37 | 38 | 41 | 42 | 44 | 41 | 43 | 43 |
| Surface mines | | | | | | | | | | | | | |
| Strip miners | 2,325 | 2,466 | 2,392 | 2,341 | 2,404 | 2,367 | 2,334 | 2,324 | 2,334 | 2,270 | 2,267 | 2,217 | 2,180 |
| Auger miners | 36 | 29 | 32 | 38 | 55 | 40 | 44 | 32 | 32 | 28 | 32 | 32 | 32 |
| Reclamation | 159 | 101 | 81 | 99 | 175 | 190 | 187 | 185 | 179 | 173 | 189 | 168 | 180 |
| Supervisory, technical, and clerical | 1,273 | 1,249 | 1,254 | 1,253 | 1,297 | 1,292 | 1,303 | 1,303 | 1,290 | 1,276 | 1,270 | 1,252 | 1,239 |
| Central preparation plant, central shop, etc. | 1,192 | 1,200 | 1,196 | 1,234 | 1,205 | 1,194 | 1,185 | 1,181 | 1,176 | 1,183 | 1,181 | 1,185 | 1,180 |
| TOTAL | 6,697 | 6,784 | 6,645 | 6,592 | 6,826 | 6,786 | 6,772 | 6,746 | 6,743 | 6,679 | 6,658 | 6,579 | 6,536 |

[1]Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.

TABLE 11.—*1988 Ohio coal-mine production employment[1], by county and month*

| County[2] | Number of employees | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Monthly average | January | February | March | April | May | June | July | August | September | October | November | December |
| Athens | 15 | 24 | 16 | 18 | 20 | 17 | 15 | 9 | 11 | 11 | 12 | 12 | 13 |
| Belmont | 722 | 806 | 769 | 678 | 788 | 775 | 782 | 728 | 767 | 713 | 618 | 606 | 611 |
| Carroll | 65 | 64 | 58 | 57 | 60 | 60 | 53 | 63 | 63 | 64 | 71 | 84 | 83 |
| Columbiana | 160 | 173 | 165 | 172 | 174 | 178 | 165 | 141 | 138 | 135 | 192 | 146 | 143 |
| Coshocton | 244 | 223 | 237 | 230 | 218 | 226 | 238 | 267 | 262 | 268 | 258 | 244 | 254 |
| Gallia | 1 | 6 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Guernsey | 16 | 26 | 27 | 27 | 14 | 12 | 11 | 9 | 11 | 11 | 13 | 13 | 12 |
| Harrison | 214 | 234 | 209 | 213 | 190 | 165 | 181 | 221 | 209 | 225 | 261 | 250 | 222 |
| Hocking | 13 | 12 | 10 | 8 | 7 | 5 | 12 | 15 | 16 | 17 | 17 | 18 | 21 |
| Holmes | 41 | 43 | 43 | 42 | 46 | 47 | 44 | 42 | 42 | 38 | 35 | 33 | 35 |
| Jackson | 92 | 140 | 120 | 86 | 87 | 82 | 76 | 82 | 80 | 88 | 87 | 87 | 90 |
| Jefferson | 262 | 266 | 266 | 264 | 239 | 251 | 263 | 260 | 262 | 265 | 266 | 274 | 270 |
| Lawrence | 25 | 21 | 21 | 42 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 |
| Mahoning | 24 | 30 | 30 | 30 | 29 | 26 | 27 | 23 | 22 | 22 | 19 | 20 | 19 |
| Meigs | 642 | 634 | 630 | 646 | 643 | 646 | 647 | 648 | 646 | 642 | 640 | 640 | 639 |
| Monroe | 222 | 221 | 218 | 219 | 224 | 225 | 224 | 222 | 220 | 221 | 223 | 225 | 223 |
| Muskingum | 82 | 49 | 45 | 44 | 73 | 70 | 55 | 113 | 111 | 112 | 105 | 101 | 105 |
| Noble | 306 | 330 | 327 | 323 | 316 | 320 | 317 | 272 | 267 | 282 | 300 | 308 | 304 |
| Perry | 259 | 244 | 242 | 242 | 260 | 259 | 250 | 279 | 287 | 284 | 251 | 253 | 253 |
| Stark | 55 | 106 | 88 | 61 | 52 | 57 | 56 | 49 | 43 | 42 | 37 | 34 | 36 |
| Tuscarawas | 242 | 220 | 224 | 227 | 317 | 292 | 276 | 241 | 241 | 211 | 209 | 231 | 219 |
| Vinton | 352 | 334 | 336 | 344 | 351 | 356 | 364 | 350 | 357 | 353 | 367 | 358 | 362 |
| Washington | 15 | 24 | 24 | 24 | 12 | 12 | 12 | 14 | 14 | 14 | 9 | 9 | 10 |
| Wayne | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 |
| TOTAL | 4,073 | 4,234 | 4,114 | 4,006 | 4,149 | 4,110 | 4,097 | 4,077 | 4,098 | 4,047 | 4,018 | 3,974 | 3,937 |

[1]Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.
[2]For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 12.—*1988 Ohio coal-mine employment[1] in central preparation plants, central shops, etc., by county and month*

| County[2] | Number of employees | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Monthly average | January | February | March | April | May | June | July | August | September | October | November | December |
| Belmont | 149 | 152 | 150 | 178 | 148 | 146 | 147 | 149 | 147 | 147 | 144 | 144 | 138 |
| Columbiana | 35 | 39 | 37 | 37 | 35 | 31 | 31 | 33 | 33 | 33 | 36 | 36 | 36 |
| Coshocton | 43 | 45 | 45 | 45 | 45 | 43 | 43 | 42 | 42 | 42 | 42 | 42 | 42 |
| Harrison | 71 | 75 | 70 | 79 | 80 | 78 | 78 | 78 | 76 | 62 | 60 | 60 | 60 |
| Hocking | 2 | 2 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 5 | 5 | 5 |
| Jackson | 16 | 17 | 17 | 17 | 18 | 17 | 16 | 14 | 14 | 14 | 16 | 16 | 16 |
| Jefferson | 37 | 33 | 34 | 32 | 47 | 48 | 46 | 36 | 32 | 34 | 34 | 36 | 36 |
| Lawrence | 27 | 30 | 29 | 29 | 27 | 26 | 26 | 25 | 27 | 29 | 24 | 27 | 29 |
| Mahoning | 13 | 14 | 14 | 15 | 15 | 13 | 11 | 13 | 11 | 11 | 13 | 13 | 14 |
| Meigs | 202 | 203 | 205 | 200 | 201 | 201 | 201 | 199 | 199 | 202 | 202 | 202 | 202 |
| Monroe | 43 | 34 | 35 | 46 | 45 | 44 | 45 | 45 | 46 | 45 | 45 | 44 | 45 |
| Muskingum | 42 | 37 | 36 | 37 | 39 | 39 | 39 | 48 | 48 | 50 | 41 | 42 | 41 |
| Noble | 292 | 292 | 297 | 298 | 295 | 293 | 290 | 280 | 286 | 287 | 294 | 294 | 292 |
| Perry | 40 | 40 | 39 | 38 | 38 | 41 | 41 | 42 | 41 | 42 | 41 | 41 | 40 |
| Scioto | 27 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 34 | 34 | 34 | 34 |
| Stark | 7 | 14 | 14 | 13 | 10 | 10 | 10 | 1 | 1 | 1 | 1 | 1 | 1 |
| Tuscarawas | 39 | 40 | 39 | 38 | 36 | 37 | 35 | 39 | 38 | 38 | 43 | 43 | 43 |
| Vinton | 107 | 110 | 109 | 106 | 102 | 103 | 102 | 113 | 111 | 111 | 106 | 105 | 106 |
| TOTAL | 1,192 | 1,200 | 1,196 | 1,234 | 1,205 | 1,194 | 1,185 | 1,181 | 1,176 | 1,183 | 1,181 | 1,185 | 1,180 |

[1]Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.
[2]For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 13.—*1988 Ohio coal-mine employment[1] in supervisory, technical, and clerical positions, by county and month*

| County[2] | Number of employees | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Monthly average | January | February | March | April | May | June | July | August | September | October | November | December |
| Athens | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Belmont | 192 | 178 | 185 | 186 | 216 | 211 | 215 | 201 | 200 | 192 | 177 | 168 | 170 |
| Carroll | 10 | 12 | 13 | 13 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 |
| Columbiana | 30 | 27 | 27 | 28 | 24 | 23 | 25 | 34 | 34 | 34 | 35 | 35 | 35 |
| Coshocton | 70 | 69 | 68 | 68 | 68 | 69 | 70 | 71 | 69 | 71 | 72 | 73 | 71 |
| Gallia | 5 | 7 | 7 | 7 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 3 | 2 |
| Guernsey | 2 | 3 | 3 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Harrison | 52 | 49 | 47 | 43 | 45 | 42 | 42 | 47 | 47 | 50 | 70 | 71 | 70 |
| Hocking | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 4 | 4 |
| Holmes | 3 | 4 | 4 | 5 | 3 | 3 | 3 | 4 | 2 | 4 | 4 | 3 | 3 |
| Jackson | 7 | 9 | 9 | 9 | 10 | 8 | 8 | 6 | 6 | 6 | 6 | 6 | 6 |
| Jefferson | 68 | 69 | 70 | 70 | 66 | 67 | 68 | 67 | 67 | 67 | 67 | 66 | 66 |
| Lawrence | 15 | 11 | 11 | 11 | 16 | 16 | 16 | 18 | 18 | 18 | 18 | 15 | 16 |
| Mahoning | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 |
| Meigs | 275 | 275 | 275 | 274 | 276 | 276 | 279 | 282 | 277 | 276 | 277 | 271 | 265 |
| Monroe | 80 | 79 | 80 | 79 | 80 | 82 | 82 | 82 | 81 | 80 | 80 | 80 | 80 |
| Muskingum | 32 | 20 | 20 | 20 | 30 | 30 | 31 | 43 | 43 | 42 | 37 | 38 | 33 |
| Noble | 137 | 141 | 139 | 139 | 138 | 141 | 144 | 133 | 131 | 130 | 132 | 135 | 135 |
| Perry | 77 | 77 | 76 | 74 | 80 | 81 | 80 | 82 | 83 | 81 | 71 | 72 | 72 |
| Scioto | 5 | 3 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Stark | 12 | 16 | 16 | 13 | 14 | 17 | 17 | 6 | 6 | 7 | 10 | 7 | 10 |
| Tuscarawas | 57 | 54 | 56 | 63 | 61 | 57 | 54 | 58 | 55 | 50 | 58 | 61 | 59 |
| Vinton | 130 | 132 | 131 | 131 | 133 | 132 | 133 | 135 | 135 | 134 | 123 | 119 | 119 |
| Washington | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 |
| Wayne | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 0 | 1 | 1 | 1 |
| TOTAL | 1,273 | 1,249 | 1,254 | 1,253 | 1,297 | 1,292 | 1,303 | 1,303 | 1,290 | 1,276 | 1,270 | 1,252 | 1,239 |

[1]Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.
[2]For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 14.—*1988 Ohio surface coal-mine reclamation employment[1], by county and month*

| County[2] | Number of employees | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Monthly average | January | February | March | April | May | June | July | August | September | October | November | December |
| Athens | 1 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Belmont | 25 | 14 | 4 | 5 | 25 | 24 | 28 | 23 | 23 | 21 | 42 | 49 | 40 |
| Carroll | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 | 2 | 1 | 1 |
| Columbiana | 7 | 3 | 2 | 4 | 10 | 10 | 8 | 12 | 6 | 6 | 9 | 10 | 7 |
| Coshocton | 4 | 1 | 1 | 1 | 11 | 12 | 9 | 1 | 1 | 5 | 1 | 1 | 1 |
| Gallia | 3 | 0 | 0 | 0 | 9 | 8 | 8 | 8 | 6 | 2 | 0 | 0 | 0 |
| Guernsey | [3] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| Harrison | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 20 |
| Holmes | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 0 | 0 | 0 |
| Jackson | 3 | 2 | 2 | 4 | 2 | 2 | 3 | 1 | 1 | 1 | 2 | 2 | 2 |
| Jefferson | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 4 | 3 | 0 | 1 |
| Lawrence | 4 | 0 | 0 | 2 | 8 | 8 | 8 | 7 | 6 | 3 | 0 | 0 | 15 |
| Mahoning | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 8 | 8 | 8 |
| Muskingum | 16 | 8 | 8 | 11 | 23 | 24 | 25 | 19 | 22 | 18 | 16 | 11 | 10 |
| Noble | 67 | 57 | 57 | 62 | 70 | 73 | 76 | 73 | 72 | 72 | 74 | 64 | 57 |
| Stark | 4 | 2 | 2 | 6 | 4 | 8 | 6 | 3 | 3 | 9 | 3 | 3 | 3 |
| Tuscarawas | 14 | 14 | 5 | 4 | 13 | 12 | 14 | 22 | 19 | 15 | 25 | 14 | 10 |
| Vinton | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 | 4 | 4 | 4 |
| TOTAL | 159 | 101 | 81 | 99 | 175 | 190 | 187 | 185 | 179 | 173 | 189 | 168 | 180 |

[1]Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.
[2]For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.
[3]Averages fewer than one employee per month.

TABLE 15.—*1988 Wage and salary payments to Ohio coal-mine employees, by county and occupational group*

| County[1] | Wage and salary payments (nearest whole dollar)[2] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | All occupations | Tonnage employees | Underground production employees | Surface production employees | Strip miners | Auger miners | Central preparation plant, central shop, etc. | Supervisory, technical, and clerical | Reclamation |
| Athens | $372,978 | | | | $368,430 | | | $3,618 | $930 |
| Belmont | 42,912,805 | $4,856,083 | $5,219,063 | $1,022,552 | 14,566,402 | $37,467 | $8,334,056 | 8,253,515 | 623,667 |
| Carroll | 1,838,134 | | | | 1,523,357 | | | 270,416 | 44,361 |
| Columbiana | 7,019,013 | 613,256 | 1,299,741 | | 2,695,635 | 13,887 | 1,109,270 | 1,179,226 | 107,998 |
| Coshocton | 12,172,368 | | | | 8,061,966 | | 1,133,428 | 2,929,564 | 47,410 |
| Gallia | 277,171 | | | | 27,687 | | | 120,556 | 128,928 |
| Guernsey | 705,070 | | | | 599,778 | | | 99,421 | 5,871 |
| Harrison | 13,237,592 | 411,204 | 845,898 | 79,720 | 6,968,732 | | 2,439,736 | 2,442,661 | 49,641 |
| Hocking | 493,356 | | | | 307,098 | | 39,563 | 146,695 | |
| Holmes | 1,104,157 | | | | 988,258 | | | 96,885 | 19,014 |
| Jackson | 3,305,510 | | 268,920 | 22,111 | 2,210,557 | | 598,857 | 178,240 | 26,825 |
| Jefferson | 12,298,956 | | | | 8,807,373 | 24,105 | 947,931 | 2,509,869 | 9,678 |
| Lawrence | 1,539,777 | | | | 412,802 | | 528,636 | 444,416 | 153,923 |
| Mahoning | 1,216,965 | | | | 586,039 | 66,009 | 340,496 | 138,792 | 85,629 |
| Meigs | 44,194,678 | | 23,756,616 | | | | 7,843,039 | 12,595,023 | |
| Monroe | 15,358,291 | 2,856,794 | 6,070,856 | 729,969 | | | 1,995,637 | 3,705,035 | |
| Muskingum | 5,399,134 | | 222,273 | | 2,249,329 | 90,188 | 1,318,335 | 1,117,600 | 401,409 |
| Noble | 27,710,403 | | | | 10,697,334 | 140,639 | 9,612,146 | 5,556,363 | 1,703,921 |
| Perry | 12,182,253 | 2,290,673 | 3,691,475 | | 1,566,286 | | 1,096,615 | 3,537,204 | |
| Scioto | 1,272,450 | | | | | | 1,086,181 | 186,269 | |
| Stark | 1,730,562 | | | | 1,226,887 | | 113,374 | 330,858 | 59,443 |
| Tuscarawas | 9,424,411 | | | | 6,389,165 | 272,064 | 1,009,131 | 1,539,140 | 214,911 |
| Vinton | 20,974,461 | | 9,327,353 | | 2,695,984 | | 3,328,507 | 5,574,625 | 47,992 |
| Washington | 596,327 | | | | 550,170 | | | 46,157 | |
| Wayne | 95,544 | | | | 77,232 | | | 18,312 | |
| TOTAL | $237,432,366 | $11,028,010 | $50,702,195 | $1,854,352 | $73,576,501 | $644,359 | $42,874,938 | $53,020,460 | $3,731,551 |

[1]For those operations reporting activity in more than one county, wage and salary payments were evenly split between the counties involved unless a by-county breakdown was provided by the operator.
[2]For those operations reporting only a total wage and salary payment to all workers, an equal pay rate was assumed for all employees. In cases where quarterly employment was reported but wage and salary payments were not, wage and salary payments for that quarter were estimated from reported payments in the other quarters to arrive at the annual figure.

## INDUSTRIAL MINERALS

Industrial minerals, other than mineral fuels, were produced in a total of 83 Ohio counties in 1988. The combined value of all nonfuel industrial minerals sold in 1988 was $382,939,819.

The average annual employment reported in 1988 for industrial mineral operations was 2,958 production employees and 1,197 nonproduction employees. There were 295 companies producing industrial minerals from 430 operations. Fifteen of these companies produced more than one mineral commodity from 22 operations.

The multiple-commodity operations employed 262 production people and 42 nonproduction people. Ten operations produced clay and shale and employed 34 production people and 2 nonproduction people; 1 operation produced limestone and shale and employed 36 production people and 2 nonproduction people; 6 operations produced limestone and clay and employed 177 production people and 31 nonproduction people; 1 operation produced limestone and sand and gravel and employed 3 production people and 1 nonproduction person; 1 operation produced sandstone and sand and gravel and employed 6 production people and 4 nonproduction people; 1 operation produced limestone, sandstone, clay, and shale and employed 6 production people and 2 nonproduction people. The 262 multiple-commodity production employees worked an average of 224 days in 1988. Total wages reported in 1988 for 262 production employees and 42 nonproduction employees at multiple-commodity operations were $8,575,954. The average annual wage was $28,210.

The total reported wages for all employees at industrial mineral operations in 1988 were $104,264,828. The average annual wage, based on those employees for whom wages were reported, was $25,094.

TABLE 16.—*1988 Value of Ohio industrial minerals*

| Commodity | Sales (tons) | Change from 1987 (tons) | Value[1] (dollars) | Percent of total value |
|---|---|---|---|---|
| Limestone and dolomite | 45,689,233 | +640,989 | $166,690,187 | 43.5 |
| Sand and gravel | 42,414,408 | +2,748,128 | 136,074,536 | 35.5 |
| Salt | 3,730,498 | +369,885 | 41,148,108 | 10.8 |
| Sandstone and conglomerate | 1,806,646 | -82,253 | 30,027,669 | 7.9 |
| Clay | 1,902,178 | +526,161 | 3,914,164 | 1.0 |
| Shale | 2,209,314 | +209,930 | 2,692,026 | 0.7 |
| Gypsum | 239,828 | -16,479 | 2,278,366 | 0.6 |
| Peat | 24,577 | +5,521 | 114,763 | <0.1 |
| TOTAL | 98,016,678 | +4,401,879 | $382,939,819 | 100.0 |

[1]The FOB value of industrial minerals sold was estimated for those mines which failed to report this information and for those producing material for captive use. These estimates were calculated using a statewide-average price per ton based on reported FOB values.

Cement being pumped from truck into Anderson Concrete Corp. portland-cement-concrete plant, Franklin County. Photo taken during 1988 Ohio's Mineral Industries Teachers Workshop.

TABLE 17.—*1988 Employment at Ohio industrial mineral operations, by county and commodity*

| County[1] | Number of employees[2] | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Limestone and dolomite | | Sand and gravel | | Sandstone and conglomerate | | Clay | | Shale | | Salt | | Gypsum | | Peat | | Multiple commodities | |
| | Production | Non-production | Production | Non-production | Production | Non-production | Production | Non-production | Production | Non-production | Production | Non-production | Production | Non-production | Production | Non-production | Production | Non-production | Production | Non-production |
| Adams | 21 | 27 | 21 | 27 | | | | | | | | | | | | | | | | |
| Allen | 29 | 6 | 27 | 6 | 2 | [3] | | | | | 1 | | | | | | [4] | [4] | | |
| Ashland | 16 | 3 | | | 15 | 3 | | | | | | | | | | | | | | |
| Ashtabula | 13 | 8 | | | 13 | 8 | | | | | | | | | | | | | | |
| Athens | 14 | 14 | 10 | [3] | 4 | 14 | | | | | | | | | | | | | | |
| Auglaize | 24 | 10 | 16 | 2 | 7 | 8 | | | 1 | | | | | | | | | | | |
| Belmont | 16 | 11 | 13 | 3 | 3 | 8 | | | | | | | | | | | | | | |
| Brown | [5] | [5] | | | | | | | | | | | | | | | | | | |
| Butler | 108 | 33 | | | 108 | 33 | | | | | | | | | | | | | | |
| Carroll | 13 | 5 | 3 | 2 | 2 | 2 | 8 | 1 | | | | | | | | | | | | |
| Champaign | 19 | 3 | | | 19 | 3 | | | | | | | | | | | [4] | [4] | | |
| Clark | 35 | 12 | 2 | 2 | 33 | 10 | | | | | | | | | | | | | | |
| Clermont | 5 | 5 | | | 5 | 5 | | | | | | | | | | | | | | |
| Clinton | 16 | 8 | 16 | 8 | | | | | | | 2 | | | | | | | | 6 | 4 |
| Columbiana | 8 | 4 | | | | | | | | | | | | | | | | | 2 | 1 |
| Coshocton | 59 | 17 | | | 9 | 16 | 48 | | | | | | | | | | | | | |
| Crawford | 44 | | 44 | | | | | | | | 3 | | 39 | 166 | | | | | | |
| Cuyahoga | 42 | 166 | | | | | | | | | | | | | | | | | | |
| Darke | 11 | 4 | 8 | 1 | 3 | 3 | | | | | | | | | | | | | | |
| Defiance | [4] | [4] | | | [4] | [4] | | | | | | | | | | | | | | |
| Delaware | 83 | 8 | 83 | 8 | | | | | | | | | | | | | | | | |
| Erie | 75 | 34 | 65 | 32 | 2 | | 8 | 2 | | | | | | | | | | | | |
| Fairfield | 5 | 2 | | | 5 | 2 | | | | | | | | | | | | | | |
| Fayette | 7 | 2 | 7 | 2 | | | | | | | 4 | [3] | | | | | | | | |
| Franklin | 176 | 40 | 65 | 4 | 107 | 36 | | | | | | | | | | | | | | |
| Fulton | [5] | [5] | | | | | | | | | | | | | | | | | | |
| Gallia | [3] | | | | [3] | | | | | | | | | | | | | | | |
| Geauga | 24 | 64 | | | 15 | 4 | 9 | 60 | | | | | | | | | | | | |
| Greene | 45 | 14 | 13 | 2 | 29 | 12 | | | 3 | | | | | | | | | | | |
| Guernsey | [5] | [5] | | | | | | | | | | | | | | | | | | |
| Hamilton | 66 | 83 | | | 66 | 83 | | | | | | | | | | | | | | |
| Hancock | 34 | 4 | 34 | 4 | | | | | | | | | | | | | | | | |
| Hardin | 4 | 14 | 4 | 14 | | | | | | | 2 | | | | | | | | | |
| Harrison | 2 | | | | | | | | | | | | | | | | | | | |
| Henry | 4 | | | | 4 | | | | | | | | | | | | | | | |
| Highland | 18 | 16 | 18 | 16 | | | | | | | | | | | | | | | 3 | |
| Hocking | 3 | | | | | | | | 1 | 1 | 2 | 1 | | | | | | | 6 | 1 |
| Holmes | 17 | 5 | | | 8 | 2 | | | | | | | | | | | | | | |
| Huron | 11 | 4 | | | 10 | 4 | 1 | | 2 | | | | | | | | | | 10 | 1 |
| Jackson | 12 | 1 | | | | | | | | | | | | | | | | | | |
| Jefferson | [5] | [5] | | | | | | | | | | | | | | | | | | |
| Knox | 53 | 26 | | | 20 | 25 | 33 | 1 | | | | | 87 | | | | | | | |
| Lake | 89 | 1 | | | 2 | 1 | | | 16 | 5 | | | | | | | | | 21 | 7 |
| Lawrence | 40 | 13 | | | 3 | 1 | | | | | 2 | | 1 | 1 | | | | | | |
| Licking | 32 | 12 | | | 29 | 11 | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Logan | 34 | 17 | 27 | 12 | 7 | 5 | | | | | | | | | | | | | | |
| Lorain | 23 | 10 | | | [3] | | 23 | 10 | | | | | | | | | | | | |
| Lucas | 51 | 24 | 42 | 18 | 9 | 6 | | | | | | | | | | | | | | |
| Madison | [5] | [5] | | | | | | | | | | | | | | | | | | |
| Mahoning | 48 | 4 | 11 | 2 | | | 1 | | | | | | | | | | | | 36 | 2 |
| Marion | 53 | 8 | 43 | 4 | 7 | 3 | | | | | 3 | 1 | | | | | | | | |
| Medina | 38 | 4 | | | 36 | 4 | | | | | 2 | | | | | | | | | |
| Meigs | 10 | 18 | | | 10 | 18 | | | | | | | | | | | | | | |
| Mercer | 14 | 1 | 14 | 1 | | | | | | | | | | | | | | | | |
| Miami | 68 | 31 | 49 | 15 | 19 | 16 | | | | | | | | | | | | | | |
| Monroe | 10 | 2 | 9 | 1 | 1 | 1 | | | | | | | | | | | | | | |
| Montgomery | 51 | 15 | 14 | 3 | 37 | 12 | | | | | | | | | | | | | | |
| Morgan | 8 | 3 | 3 | | 5 | 3 | | | | | | | | | | | | | | |
| Morrow | 8 | 1 | | | 8 | 1 | | | | | | | | | | | | | | |
| Muskingum | 58 | 12 | 44 | 7 | 10 | 4 | | | 1 | | | | | | | | | | 3 | 1 |
| Noble | 13 | 2 | 11 | 2 | | | | | | | 2 | | | | | | | | | |
| Ottawa | 117 | 46 | 104 | 44 | | | | | | | | | | | 13 | 2 | | | | |
| Paulding | 139 | 21 | 19 | 4 | | | | | | | | | | | | | | | 120 | 17 |
| Perry | 68 | 6 | 12 | 3 | | | 54 | 3 | 2 | | | | | | | | | | | |
| Pickaway | 18 | 2 | 5 | 1 | 13 | 1 | | | | | | | | | | | | | | |
| Pike | 12 | 19 | 5 | 7 | 4 | 12 | 3 | | | | | | | | | | | | | |
| Portage | 83 | 47 | | | 83 | 47 | | | | | | | | | | | | | | |
| Preble | 8 | 20 | 6 | 3 | 2 | 17 | | | | | | | | | | | | | | |
| Putnam | 7 | 2 | 6 | 2 | | | | | 1 | | | | | | | | | | | |
| Richland | 15 | 4 | | | 15 | 4 | | | | | | | | | | | [4] | [4] | | |
| Ross | 36 | 7 | | | 15 | 4 | 21 | 3 | | | | | | | | | | | | |
| Sandusky | 97 | 30 | 97 | 30 | | | | | | | | | | | | | | | | |
| Scioto | 20 | 5 | | | 8 | 4 | 12 | 1 | | | | | | | | | | | | |
| Seneca | 65 | 12 | 65 | 12 | | | | | | | | | | | | | | | | |
| Shelby | 20 | 26 | 16 | 20 | 4 | 6 | | | | | | | | | | | | | | |
| Stark | 50 | 11 | | | 29 | 6 | | | 1 | | | | | | | | | | 20 | 5 |
| Summit | 18 | 7 | | | 17 | 7 | | | | | | | 1 | | | | | | | |
| Trumbull | 7 | 9 | | | 4 | 8 | 3 | 1 | | | | | | | | | | | | |
| Tuscarawas | 89 | 14 | 4 | 1 | 21 | 8 | 6 | | 12 | 1 | 11 | 1 | | | | | | | 35 | 3 |
| Union | 17 | 7 | 17 | 7 | | | | | | | | | | | | | | | | |
| Van Wert | 15 | 5 | 15 | 5 | | | | | | | | | | | | | | | | |
| Vinton | 3 | | 3 | | | | | | | | | | | | | | | | | |
| Warren | 20 | 11 | | | 20 | 11 | | | | | | | | | | | | | | |
| Washington | 13 | 6 | | | 13 | 6 | | | | | | | | | | | | | | |
| Wayne | 53 | 14 | 12 | 2 | 31 | 7 | | | | | | | 10 | 5 | | | | | | |
| Williams | 7 | 7 | | | 7 | 7 | | | | | | | | | | | [4] | [4] | | |
| Wood | 27 | 10 | 27 | 10 | | | | | | | | | | | | | | | | |
| Wyandot | 144 | 14 | 127 | 13 | 16 | 1 | | | 1 | [3] | | | | | | | | | | |
| Lake Erie | 6 | 4 | | | 6 | 4 | | | | | | | | | | | | | | |
| Maumee River | 4 | | | | 4 | | | | | | | | | | | | | | | |
| TOTAL | 2,958 | 1,197 | 1,256 | 362 | 984 | 527 | 230 | 82 | 41 | 7 | 34 | 3 | 138 | 172 | 13 | 2 | [4] | [4] | 262 | 42 |

[1]For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.
[2]Reflects employment as reported. Employment is not included for mines which were owner operated.
[3]Averages fewer than one employee per month.
[4]No employment information was given in 1988.
[5]This county reported no production or sales of industrial minerals in 1988.

## LIMESTONE AND DOLOMITE

Limestone and dolomite were sold or produced by 75 companies at 110 operations in 51 Ohio counties during 1988. Sales of limestone and dolomite totalled 45,689,233 tons; Erie, Franklin, Wyandot, Sandusky, and Ottawa Counties accounted for 38.1 percent of those sales. Reported known production totalled 45,525,405 tons.

Lime produced from Ohio limestone and dolomite totalled 1,483,285 tons in 1988, and came from five operations in Ottawa, Sandusky and Wyandot Counties.

The total value[3] of limestone and dolomite sold in 1988 was $166,690,187, with an average price per ton of $3.65.

[3]See footnote 1, p. 8.

An annual average of 1,256 employees worked an average of 207 days to produce limestone and dolomite. Total wages reported in 1988 for 1,256 production employees and 362 nonproduction employees were $40,769,400. The average annual wage, based on those employees for whom wages were reported, was $25,197. An additional 222 employees mined limestone and dolomite along with one or more other mineral commodities.

Primary uses for crushed and broken limestone and dolomite were building, road base, and resurfacing, stone for portland cement concrete, and stone for asphaltic concrete. Other major uses for various forms of the stone included the manufacture of portland cement, aglime (a noncalcined product), flux stone, and riprap.

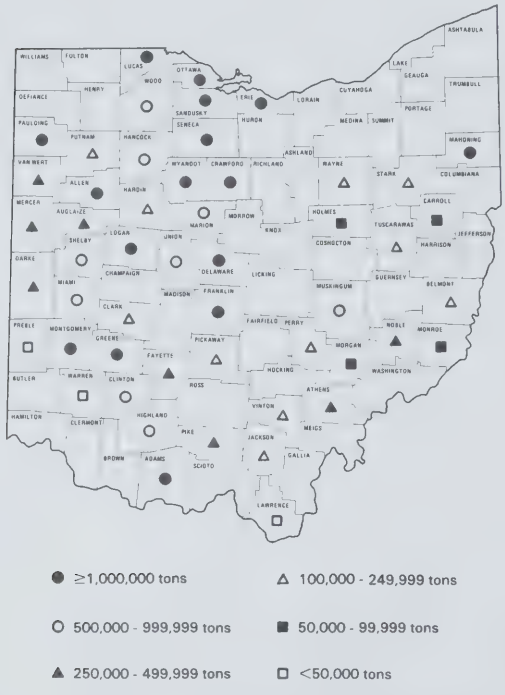


FIGURE 6.—Sales of limestone and dolomite in Ohio in 1988, by county.

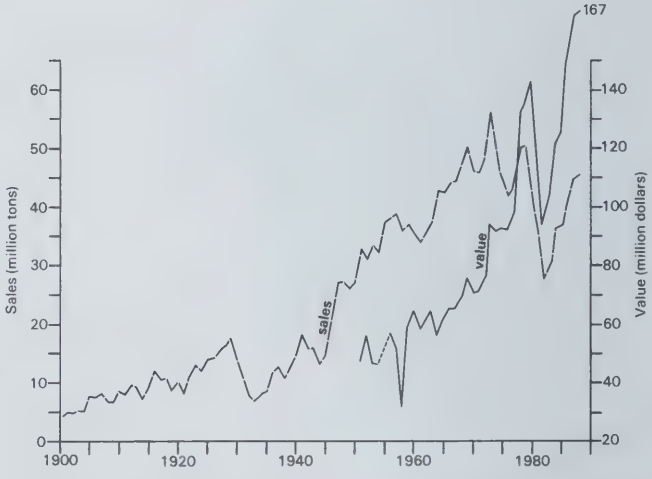


FIGURE 7.—Sales and value of limestone and dolomite in Ohio. Value line dashed where data not available.

Blasting at American Aggregates Corp. Columbus Limestone quarry, Franklin County. Photo taken during 1988 Ohio's Mineral Industries Teachers Workshop.

TABLE 18.—*1988 Ohio limestone and dolomite sales, by county and type*

| County | Tons sold | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total, all types | Crushed and broken stone | | | | | | | | | Dimension stone | For portland cement manufacture | Agricultural stone (aglime) | Raw stone for burning | Unspecified/ other |
| | | Total | Riprap | Flux stone | Stone for portland cement concrete | Stone for asphaltic concrete | Building, road base, resurfacing | Railroad ballast | Refractory stone | Unspecified/ other | | | | | |
| Adams | 1,497,896 | 1,441,115 | 64,756 | 97,695 | 92,517 | 42,983 | 872,035 | 142,314 | | 128,815 | | 7,607 | 49,174 | | |
| Allen | 1,140,203 | 1,133,132 | 4,926 | | 20,137 | 38,083 | 953,566 | 98,927 | | 17,493 | 1,843 | | 5,228 | | |
| Athens | 318,164 | 318,164 | 48,057 | | | | 270,107 | | | | | | | | |
| Auglaize | 467,295 | 463,545 | 7,664 | | | | 455,542 | 339 | | | | | 3,750 | | |
| Belmont | 103,781 | 103,781 | 10,060 | | | | 93,721 | | | | | | | | |
| Carroll | 81,083 | 81,083 | | | | | 81,083 | | | | | | | | |
| Clark | 169,564 | 169,564 | | | | | 169,564 | | | | | | | | |
| Clinton | 696,610 | 662,804 | 56,136 | | 39,952 | 56,527 | 510,189 | | | | | | 33,806 | | |
| Crawford | 1,300,931 | 1,245,233 | 11,427 | 356,178 | | | 785,482 | 2,521 | | 89,625 | | | 55,698 | | |
| Darke | 292,107 | 292,107 | | | | | 292,107 | | | | | | | | |
| Delaware | 2,749,802 | 2,738,411 | 80,680 | 31 | 62,907 | | 2,478,995 | 407 | | 115,391 | 2,750 | | 8,641 | | |
| Erie | 4,147,835 | 3,899,306 | 104,267 | | 848,052 | 567,853 | 2,269,365 | 69,224 | | 40,545 | | | 118,066 | | 130,463 |
| Fayette | 254,276 | 207,752 | | | 4,653 | 2,569 | 200,530 | | | | | | 46,524 | | |
| Franklin | 3,639,311 | 3,639,311 | | | | | 3,639,311 | | | | | | | | |
| Greene | 1,080,129 | 296,946 | | | | | 296,946 | | | | | 783,183 | | | |
| Hancock | 810,184 | 806,651 | 5,758 | | 25,432 | | 494,106 | 182,941 | 96,686 | 1,728 | | | 1,783 | | 1,750 |
| Hardin | 137,238 | 126,942 | 5,511 | | | | 121,431 | | | | | | 10,296 | | |
| Highland | 810,216 | 746,803 | 10,899 | | 16,143 | 10,749 | 666,795 | 40,347 | | 1,870 | | 8,788 | 54,625 | | |
| Holmes | 84,417 | 84,417 | | | | | 84,417 | | | | | | | | |
| Jackson | 177,388 | 177,388 | | | | | 174,038 | | | 3,350 | | | | | |
| Lawrence | 21,783 | 21,783 | 21,783 | | | | | | | | | | | | |
| Logan | 1,233,452 | 433,957 | 19,990 | | 108,194 | 60,553 | 208,955 | | | 36,265 | | | | | 799,495 |
| Lucas | 1,885,064 | 1,803,993 | 81,893 | | 81,069 | 81,069 | 1,397,822 | 81,070 | | 81,070 | | | 81,071 | | |
| Mahoning | 1,055,634 | 614,676 | | | | | 167,167 | | | 447,509 | | 414,825 | 26,133 | | |
| Marion | 994,258 | 982,781 | 7,979 | 120 | 25,203 | 30,478 | 915,570 | 124 | | 3,307 | | | 11,477 | | |
| Mercer | 265,674 | 240,397 | 24,902 | | 24,579 | 24,580 | 117,176 | 24,580 | | 24,580 | | | 25,277 | | |
| Miami | 694,349 | 626,398 | 6,354 | 21,970 | 34,345 | 47,480 | 406,472 | 12,706 | | 97,071 | 3,402 | | 64,549 | | |
| Monroe | 87,239 | 87,239 | | | | | | | | 87,239 | | | | | |
| Montgomery | 1,238,853 | 750,069 | | | | | 750,069 | | | | | 488,784 | | | |
| Morgan | 80,404 | 80,404 | | | | | 80,404 | | | | | | | | |
| Muskingum | 977,700 | 883,625 | 93,379 | | 70,947 | 107,056 | 589,809 | 22,434 | | | | | 94,075 | | |
| Noble | 312,392 | 312,392 | 3,406 | | | | 308,986 | | | | | | | | |
| Ottawa | 2,995,642 | 2,702,259 | 219,023 | 112,475 | 804,380 | 207,794 | 1,358,587 | | | | | | 46,183 | 247,200 | |
| Paulding | 1,241,577 | 854,619 | 34,081 | | 370,904 | 30,361 | 328,188 | 30,361 | 30,362 | 30,362 | | 356,596 | 30,362 | | |
| Perry | 187,210 | 187,210 | | | | | 187,210 | | | | | | | | |
| Pickaway | 164,694 | 164,694 | 2,909 | | 37,296 | 1,146 | 123,343 | | | | | | | | |
| Pike | 310,522 | 271,478 | 16,508 | | 55,462 | 39,322 | 159,105 | 1,081 | | | | | 39,044 | | |
| Preble | 40,515 | 36,831 | 8,196 | | | | 28,635 | | | | 3,684 | | | | |
| Putnam | 178,296 | 178,296 | 1,343 | | | | 176,953 | | | | | | | | |
| Sandusky | 3,069,017 | 401,040 | 198,168 | 19,585 | 13,246 | 8,745 | 149,205 | | | 12,091 | | | 251,124 | 2,416,853 | |
| Seneca | 1,498,860 | 1,286,207 | 4,609 | | 21,001 | 161,791 | 1,098,806 | | | | 29,015 | 69,502 | 114,136 | | |
| Shelby | 709,485 | 709,310 | 95,624 | | | 317,904 | 232,478 | 63,304 | | | | | 175 | | |
| Stark | 157,318 | 157,318 | | | | | 157,318 | | | | | | | | |
| Tuscarawas | 198,360 | 198,360 | 15,341 | | | | 183,019 | | | | | | | | |
| Union | 824,635 | 776,539 | 1,011 | | 28,885 | 47,875 | 698,768 | | | | | | 48,096 | | |
| Van Wert | 388,364 | 370,276 | 36,632 | | 63,046 | 35,958 | 78,164 | 306 | | 156,170 | 93 | | | | 17,995 |
| Vinton | 247,660 | 196,434 | | | | | 196,434 | | | | | | 51,226 | | |
| Warren | 6,102 | 6,102 | | | | | 6,102 | | | | | | | | |
| Wayne | 164,386 | 164,386 | | | | | 164,386 | | | | | | | | |
| Wood | 930,183 | 775,483 | 93,471 | | 85,319 | 85,319 | 306,607 | 55,289 | | 149,478 | | | 60,707 | | 93,993 |
| Wyandot | 3,571,175 | 3,183,485 | 16,255 | 814,198 | 221,721 | 222,524 | 1,578,552 | 78,308 | 77,148 | 174,779 | | | 161,129 | 226,561 | |
| TOTAL | 45,689,233 | 38,092,496 | 1,412,998 | 1,422,252 | 3,155,390 | 2,228,719 | 27,063,620 | 906,583 | 204,196 | 1,698,738 | 40,787 | 2,129,285 | 1,492,355 | 2,890,614 | 1,043,696 |

TABLE 19.—*1988 Production of lime from Ohio stone, by county and type*

| County | Total tons | Building (tons) | Chemical and industrial (tons) | Refractory (tons) | Other (tons) |
|---|---|---|---|---|---|
| Ottawa | 123,600 | 62,826 | 60,774 | | |
| Sandusky | 1,238,041 | | 864,938 | 43,919 | 329,184 |
| Wyandot | 121,644 | | 121,644 | | |
| TOTAL | 1,483,285[1] | 62,826 | 1,047,356 | 43,919 | 329,184 |

[1]Burning produced a 48.7 percent weight loss.

## SAND AND GRAVEL

Sand and gravel were sold or produced by 196 companies at 250 operations in 60 Ohio counties during 1988. Sales[5] of sand and gravel totalled 42,414,408 tons, of which sand comprised 20,886,159 tons and gravel comprised 21,528,249 tons. Hamilton, Butler, Franklin, Portage, and Greene Counties led in sales, accounting for 46.9 percent of the total. Reported known production[4] of sand and gravel totalled 43,585,118 tons in 1988.

A total of 181,396 tons of sand were dredged from Lake Erie, and 55,889 tons of sand and 60,229 tons of gravel were dredged from the Maumee River. No gravel was dredged from Lake Erie in 1988. Total sand and gravel production from Lake Erie and the Maumee River was 297,514 tons in 1988.

The total value[5] of sand and gravel sold in 1988 was $136,074,536, with an average price per ton of $3.21.

An annual average of 984 employees worked an average of 173 days in 1988 to produce sand and gravel. Total wages of $35,191,650 were reported for 984 production employees and 527 nonproduction employees. The average annual wage, based on those employees for whom wages were reported, was $23,290. An additional 9 employees mined sand and gravel along with one or more other mineral commodities.

Road construction and resurfacing, building, portland cement concrete, and asphaltic concrete were the major uses for Ohio sand and gravel in 1988.

[4]Please note—Sales and production figures for sand and gravel include material dredged from Lake Erie and the Maumee River.

[5]Includes reported and estimated values. See footnote 1, p. 8.

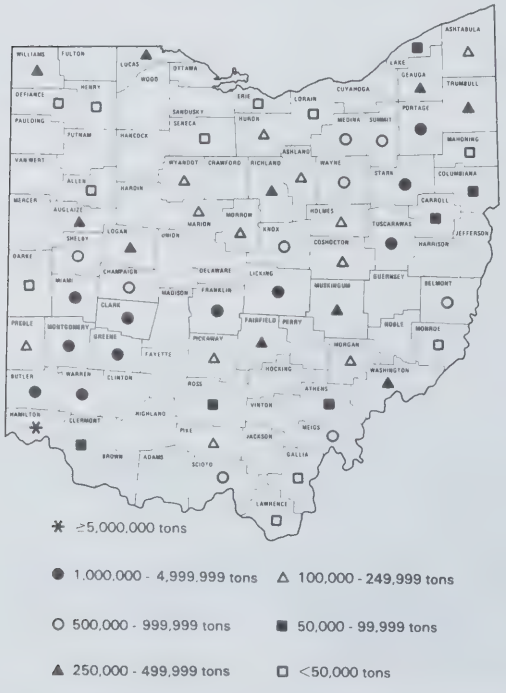


FIGURE 8.—Sales of sand and gravel in Ohio in 1988, by county.

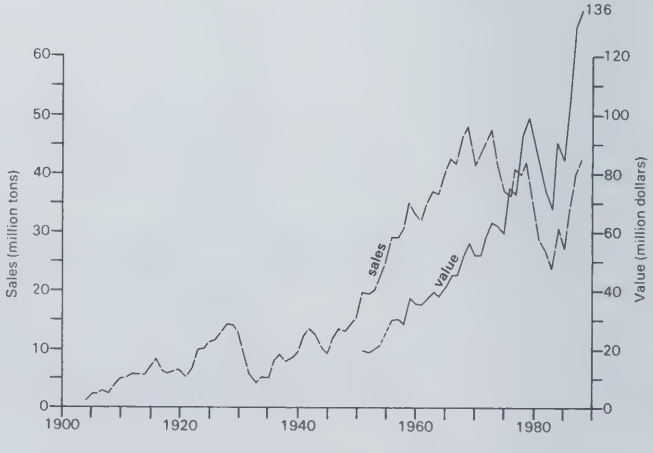


FIGURE 9.—Sales and value of sand and gravel in Ohio. Value line dashed where data not available. Figures from 1984 to 1988 include Lake Erie and Maumee River dredged material.

TABLE 20.—*1988 Ohio sand sales, by county and type*

| County | Tons sold | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Total | Foundry | Portland cement concrete | Asphaltic concrete | Building | Road construction, resurfacing | Filtration | Other/ unspecified |
| Allen | 21,673 | | 233 | 12,940 | | | 8,293 | 207 |
| Ashland | 80,815 | | | | 8,322 | 68,558 | | 3,935 |
| Ashtabula | 117,473 | | 800 | 200 | 20,658 | 38,000 | 2,500 | 55,315 |
| Athens | 35,782 | | | 2,344 | | 14,992 | | 18,446 |
| Auglaize | 147,743 | | 121,115 | | 6,024 | | | 20,604 |
| Belmont | 329,933 | | 75,572 | 254,361 | | | | |
| Butler | 1,583,507 | | 95,162 | 70,004 | 182,319 | 1,069,992 | | 166,030 |
| Carroll | 38,802 | | | | | 26,137 | | 12,665 |
| Champaign | 178,397 | | | | 39,784 | 116,998 | | 21,615 |
| Clark | 475,897 | | 140,308 | 159,036 | 36,677 | 139,876 | | |
| Clermont | 48,359 | | | | | | | 48,359 |
| Columbiana | 22,570 | | | | | | | 22,570 |
| Coshocton | 120,586 | | 8,704 | 12,401 | 25,294 | 50,880 | 264 | 23,043 |
| Darke | 19,391 | | | | | | | 19,391 |
| Erie | 20,012 | 2,136 | | | | | | 17,876 |
| Fairfield | 256,359 | | 151,233 | 81,438 | 17,304 | 3,300 | | 3,084 |
| Franklin | 1,476,964 | | 14,531 | 178,395 | 203,051 | 953,580 | | 127,407 |
| Gallia | 1,783 | 1,783 | | | | | | |
| Geauga | 246,943 | | 156,487 | | 73,116 | 8,465 | | 8,875 |
| Greene | 912,377 | | 49,265 | 21,572 | 16,527 | 333,232 | | 491,781 |
| Hamilton | 3,015,767 | | 668,882 | 282,359 | 194,346 | 1,400,609 | 6,195 | 463,376 |
| Henry | 7,437 | | | | | 7,437 | | |
| Holmes | 72,405 | | 50,739 | | 13,515 | 1,041 | | 7,110 |
| Huron | 130,280 | | 29,716 | | 88,280 | 6,344 | 5,472 | 468 |
| Knox | 367,042 | | 500 | 20,684 | 25,470 | 197,477 | | 122,911 |
| Lake | 27,000 | | 12,500 | 7,500 | | 1,000 | 4,000 | 2,000 |
| Lawrence | 19,977 | | | | | | | 19,977 |
| Licking | 484,113 | 19,890 | 10,000 | 16,744 | 130,819 | 229,311 | 9,000 | 68,349 |
| Logan | 252,098 | | 58,527 | | 16,894 | | 79,047 | 97,630 |
| Lorain | 1,776 | | | | | | | 1,776 |
| Lucas | 372,153 | | | | 372,153 | | | |
| Mahoning | 5,226 | | | | 5,226 | | | |
| Marion | 122,837 | | 41,519 | | 81,112 | | 206 | |
| Medina | 748,721 | | | 129,967 | 157,843 | 422,477 | | 38,434 |
| Meigs | 345,993 | | | 317,477 | 25,096 | 3,420 | | |
| Miami | 425,559 | | | | 22,500 | 78,167 | | 324,892 |
| Monroe | 3,750 | | | | | | | 3,750 |
| Montgomery | 590,342 | | 123,867 | 94,420 | 112,800 | 254,938 | | 4,317 |
| Morgan | 93,520 | | 13,755 | 13,756 | 11,389 | 13,757 | | 40,863 |
| Morrow | 24,169 | | | | 24,169 | | | |
| Muskingum | 173,962 | | 16,234 | 122,221 | 21,376 | | 45 | 14,086 |
| Pickaway | 101,593 | | | | | 101,593 | | |
| Pike | 200,920 | | 139,092 | 31,972 | 29,816 | | | 40 |
| Portage | 2,371,560 | | 514,055 | 173,081 | 333,397 | 477,162 | 41 | 873,824 |
| Preble | 57,570 | | 11,511 | 5,757 | 23,027 | 17,275 | | |
| Richland | 120,304 | 40,980 | 294 | 6,371 | 28,777 | 1,042 | | 42,840 |
| Ross | 44,991 | | 431 | 20,706 | 19,245 | 2,745 | | 1,864 |
| Scioto | 603,966 | | 497,599 | 56,018 | 28,262 | | | 22,087 |
| Seneca | 10,382 | | | | | | | 10,382 |
| Shelby | 294,734 | | 126,650 | 31,750 | 38,900 | 10,000 | | 87,434 |
| Stark | 651,140 | | 68,475 | 149,095 | 214,592 | 53,391 | | 165,587 |
| Summit | 307,229 | 1,932 | 12,541 | 1,171 | 221,022 | 62,662 | | 7,901 |
| Trumbull | 381,384 | | 106,510 | 156,300 | 87,275 | 7,657 | | 23,642 |
| Tuscarawas | 701,784 | | 6,141 | 42,995 | 185,826 | 218,097 | 435 | 248,290 |
| Warren | 464,931 | | | | 72,524 | 162,261 | | 230,146 |
| Washington | 107,711 | | 13,626 | 26,298 | 28,943 | 17,931 | 17,302 | 3,611 |
| Wayne | 404,249 | | 69,849 | 31,180 | 26,303 | | | 276,917 |
| Williams | 231,236 | 83,072 | 80,538 | 13,312 | 24,796 | | 301 | 29,217 |
| Wyandot | 173,697 | | 114,723 | 15,938 | 35,169 | 1,570 | 6,297 | |
| Lake Erie | 181,396 | | 137,410 | 20,520 | | 23,466 | | |
| Maumee River | 55,889 | | 55,889 | | | | | |
| TOTAL | 20,886,159 | 149,793 | 3,794,983 | 2,580,283 | 3,329,938 | 6,596,840 | 139,398 | 4,294,924 |

TABLE 21.—*1988 Ohio gravel sales, by county and type*

| County | Tons sold | | | | | | |
|---|---|---|---|---|---|---|---|
| | Total | Building | Portland cement concrete | Asphaltic concrete | Road construction, resurfacing | Filtration | Other/ unspecified |
| Allen | 3,852 | 3,322 | | | 530 | | |
| Ashland | 148,619 | 16,124 | | | 125,309 | | 7,186 |
| Ashtabula | 124,185 | 24,910 | | | 15,000 | 6,000 | 78,275 |
| Athens | 19,832 | | | 2,344 | 7,496 | | 9,992 |
| Auglaize | 167,225 | | 142,585 | | | | 24,640 |
| Belmont | 416,726 | 1,737 | 121,511 | 61,949 | 35,236 | | 196,293 |
| Butler | 2,656,443 | 554,788 | 61,185 | | 1,466,198 | 264,476 | 309,796 |
| Carroll | 54,801 | | | | 20,401 | | 34,400 |
| Champaign | 326,903 | 72,082 | | | 168,364 | | 86,457 |
| Clark | 913,591 | 222,860 | 155,980 | 156,308 | 214,486 | | 163,957 |
| Clermont | 43,520 | | | | | | 43,520 |
| Columbiana | 52,603 | 22,564 | | | | | 30,039 |
| Coshocton | 114,495 | 20,335 | 11,214 | 11,049 | 71,279 | 530 | 88 |
| Darke | 21,555 | | | | | | 21,555 |
| Defiance | 7,062 | | | | 6,625 | 437 | |
| Erie | 1,250 | | | | | 1,250 | |
| Fairfield | 198,774 | 29,523 | 25,491 | 73,613 | 38,761 | | 31,386 |
| Franklin | 2,409,687 | 555,311 | 10,217 | 178,844 | 1,596,711 | | 68,604 |
| Gallia | 5,375 | | | | | | 5,375 |
| Geauga | 91,910 | 20,998 | | | 16,870 | 48,550 | 5,492 |
| Greene | 1,140,810 | 1,000 | 56,386 | 26,896 | 481,239 | 3,690 | 571,599 |
| Hamilton | 3,103,325 | 673,970 | 317,547 | 202,599 | 1,717,981 | 14,621 | 176,607 |
| Holmes | 92,024 | 3,951 | 41,379 | | 20,172 | 13,660 | 12,862 |
| Huron | 26,830 | 26,830 | | | | | |
| Knox | 395,344 | 68,096 | 1,750 | | 133,548 | | 191,950 |
| Lake | 29,000 | 1,500 | 12,500 | 7,500 | 1,000 | 4,000 | 2,500 |
| Licking | 516,480 | 68,611 | 4,000 | 13,899 | 302,619 | | 127,351 |
| Logan | 98,836 | 6,435 | | | | | 92,401 |
| Mahoning | 1,742 | 1,742 | | | | | |
| Marion | 27,762 | 1,221 | 1,869 | | | | 24,672 |
| Medina | 226,579 | 86,007 | | | 140,572 | | |
| Meigs | 252,711 | 74,528 | | 169,829 | 6,434 | | 1,920 |
| Miami | 872,009 | 25,262 | | | 113,485 | | 733,262 |
| Monroe | 3,750 | | | | | | 3,750 |
| Montgomery | 1,229,744 | 323,325 | 165,316 | 98,649 | 326,219 | 5,358 | 310,877 |
| Morgan | 140,377 | 26,574 | 32,096 | 32,097 | 32,097 | | 17,513 |
| Morrow | 79,537 | 35,380 | | | 31,560 | 7,295 | 5,302 |
| Muskingum | 99,723 | | 15,101 | 64,771 | 16,355 | | 3,496 |
| Pickaway | 146,195 | | | | 146,195 | | |
| Pike | 37,413 | | 1,686 | 10,111 | 25,541 | | 75 |
| Portage | 1,212,468 | 288,573 | 140,675 | 135,640 | 357,846 | 926 | 288,808 |
| Preble | 157,460 | 47,238 | 31,640 | 15,598 | 62,984 | | |
| Richland | 299,125 | 251,547 | 58 | 4,400 | 27,678 | 3,702 | 11,740 |
| Ross | 22,617 | | 655 | 9,206 | 11,952 | | 804 |
| Scioto | 63,207 | | | | 63,207 | | |
| Seneca | 2,595 | | | | | | 2,595 |
| Shelby | 320,264 | 40,900 | 136,350 | 33,250 | 10,000 | | 99,764 |
| Stark | 696,959 | 33,256 | 108,733 | 202,013 | 154,086 | | 198,871 |
| Summit | 206,222 | 140,209 | 7,000 | | 55,207 | 159 | 3,647 |
| Trumbull | 21,781 | 16,897 | | | 4,884 | | |
| Tuscarawas | 756,234 | 215,223 | 5,997 | 52,017 | 278,720 | 520 | 203,757 |
| Warren | 707,145 | 127,346 | | | 274,325 | | 305,474 |
| Washington | 162,365 | 42,019 | 24,644 | 41,644 | 26,507 | 15,888 | 11,663 |
| Wayne | 337,883 | 58,400 | 58,048 | 53,920 | | | 167,515 |
| Williams | 172,638 | 64,021 | | | 29,207 | | 79,410 |
| Wyandot | 30,458 | 11,671 | 5,667 | 1,349 | | 10,752 | 1,019 |
| Maumee River | 60,229 | | | | | | 60,229 |
| TOTAL | 21,528,249 | 4,306,286 | 1,697,280 | 1,659,495 | 8,634,886 | 401,814 | 4,828,488 |

TABLE 22.—*1988 Ohio Lake Erie and Maumee River sand and gravel production*

| Area | Production[1] | |
|---|---|---|
| | Cubic yards | Short tons |
| Lake Erie | | |
| Fairport (sand) | 65,388 | 88,274 |
| Maumee Bay | [2] | |
| Vermilion-Lorain Area "A" (sand) | 61,650 | 83,227 |
| Vermilion-Lorain Area "B" (sand) | 7,330 | 9,895 |
| Maumee River | | |
| Sand | 41,399 | 55,889 |
| Gravel | 44,614 | 60,229 |
| TOTAL | 220,381 | 297,514 |

[1]Production reported in cubic yards; converted to tons in the ratio of 1 cubic yard equals 1.35 short tons.
[2]No production reported for 1988.

## SANDSTONE AND CONGLOMERATE

Sandstone and conglomerate were produced by 16 companies at 28 operations in 16 Ohio counties during 1988. Sales totalled 1,806,646 tons, with Geauga, Perry, Ross, Knox, and Huron Counties accounting for 83.2 percent of that total. Crushed sandstone and conglomerate accounted for 1,724,177 tons, and dimension stone accounted for 82,469 tons of the total sales. Reported known production of sandstone and conglomerate was 1,973,306 tons in 1988.

The total value[6] of sandstone and conglomerate sold in 1988 was $30,027,669, with an average price per ton of $18.47 for crushed stone and $32.73 for dimension stone.

An annual average of 230 employees worked an average of 137 days in 1988 to produce sandstone and conglomerate. Total wages earned in 1988 by 230 production employees and 82 nonproduction employees were $6,585,538. The average annual wage in 1988 was $21,079. An additional 12 employees mined sandstone and conglomerate along with one or more other mineral commodities.

Crushed stone was used primarily for foundry sand, glass sand, construction, and aggregate. Dimension stone was used primarily for rough construction, rough architectural purposes, and finished stone.

[6]Includes reported and estimated values. See footnote 1, p. 8.

FIGURE 10.—Sales of sandstone and conglomerate in Ohio in 1988, by county.

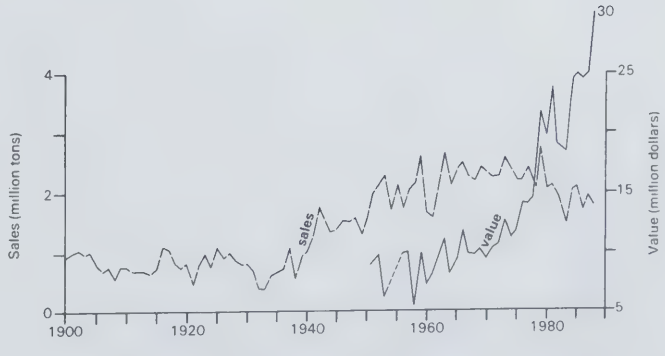


FIGURE 11.—Sales and value of sandstone and conglomerate.

TABLE 23.—*1988 Ohio sales of crushed sandstone and conglomerate, by county and type*

| County | Tons sold | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Foundry sand | Glass sand | Metallurgical pebble | Refractory | Riprap | Aggregate | Silica flour | Polishing/ grinding sand | Fire and furnace sand | Engine sand | Frac sand | Other/ unspecified |
| Columbiana | 37,488 | | | | | | 3,400 | | | | | | 34,088 |
| Geauga | 734,217 | 263,938 | 93,417 | 108,310 | 6,665 | 188 | 62,846 | | 24,388 | 9,974 | 8,300 | 11,545 | 144,646 |
| Huron | 108,777 | | | | | 108,777 | | | | | | | |
| Knox | 160,669 | 31,230 | 56,712 | | | | | 58,955 | | | 4,303 | 5,621 | 3,848 |
| Lorain | 79,960 | | | | | | 79,960 | | | | | | |
| Mahoning | 34,709 | | | | | | | | | | | | 34,709 |
| Perry | 268,830 | 61,920 | 99,869 | | | | | 89,692 | | | | | 17,349 |
| Pike | 7,843 | | | 5,543 | | | | | | | | | 2,300 |
| Ross | 212,240 | 69,129 | 85,459 | | | | | | | | 25,481 | | 32,171 |
| Trumbull | 30,946 | | | | | | 30,946 | | | | | | |
| Tuscarawas | 48,498 | | | | | 9,969 | | | | 38,529 | | | |
| TOTAL | 1,724,177 | 426,217 | 335,457 | 113,853 | 6,665 | 118,934 | 177,152 | 148,647 | 24,388 | 48,503 | 38,084 | 17,166 | 269,111 |

Central Silica Co. sand-processing plant, Perry County. Photo taken during 1988 Ohio's Mineral Industries Teachers Workshop.

TABLE 24.—*1988 Ohio sales of dimension sandstone and conglomerate, by county and type*

| County | Tons sold | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Refractory | Rough construction | Rubble | Grindstone | Rough architectural | Finished | Curbing | Flagging | Other/ unspecified |
| Carroll | 2,462 | | | | | | 2,462 | | | |
| Coshocton | 21,508 | 1,382 | | | | 20,126 | | | | |
| Erie | 4,925 | | | 2,356 | 3 | | 2,437 | | 129 | |
| Geauga | 10,500 | | 10,500 | | | | | | | |
| Holmes | 225 | | | | | 225 | | | | |
| Knox | 1,434 | | | | | 1,434 | | | | |
| Lorain | 12,113 | | | 5,779 | 10 | | 5,990 | | 249 | 85 |
| Ross | 5,638 | | 5,638 | | | | | | | |
| Scioto | 23,664 | | 23,664 | | | | | | | |
| TOTAL | 82,469 | 1,382 | 39,802 | 8,135 | 13 | 21,785 | 10,889 | 0 | 378 | 85 |

## CLAY

Clay was produced by 23 companies at 35 operations in 14 Ohio counties during 1988. Clay sales (including material for captive use) totalled 1,902,178 tons, with Tuscarawas, Paulding, Greene, Perry, and Stark Counties accounting for 90.1 percent of the total sales. The total value[7] of clay sold in 1988 was $3,914,164, with an average price per ton of $2.06. Reported known production of clay was 2,184,592 tons.

An annual average of 41 employees worked an average of 93 days in 1988 mining clay. Total wages reported in 1988 for 41 production employees and 7 nonproduction employees were $885,087. The average annual wage, based on those employees for whom wages were reported, was $18,439. An additional 217 employees mined clay along with one or more other mineral commodities.

Clay mined in Ohio in 1988 was largely for captive use in the production of common clay products, for cement manufacture, and construction.

[7]Includes reported and estimated values. See footnote 1, p. 8.

TABLE 25.—*1988 Ohio clay sales, by county and type*

| County | Tons sold | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Total | Common clay products | Glazed ware | Vitrified products | Refractories | Cement manufacture | Lightweight aggregate | Other/ unspecified |
| Auglaize | 4,153 | 4,153 | | | | | | |
| Coshocton | 812 | | | | | | | 812 |
| Greene | 124,516 | | | | | 124,516 | | |
| Hocking | 19,402 | | | 19,402 | | | | |
| Holmes | 24,242 | 24,242 | | | | | | |
| Jackson | 44,270 | 44,270 | | | | | | |
| Lawrence | 48,449 | 48,449 | | | | | | |
| Muskingum | 15,493 | 11,805 | | 3,688 | | | | |
| Paulding | 182,764 | | | | | 182,764 | | |
| Perry | 59,968 | 46,468 | | | | | | 13,500 |
| Putnam | 1,200 | 1,200 | | | | | | |
| Stark | 51,681 | 21,818 | | | 29,380 | | 483 | |
| Tuscarawas | 1,295,465 | 345,573 | 13,952 | 63,075 | 51,952 | | | 820,913 |
| Wyandot | 29,763 | 29,763 | | | | | | |
| TOTAL | 1,902,178 | 577,741 | 13,952 | 86,165 | 81,332 | 307,280 | 483 | 835,225 |

FIGURE 12.—Clay sales in Ohio in 1988, by county.

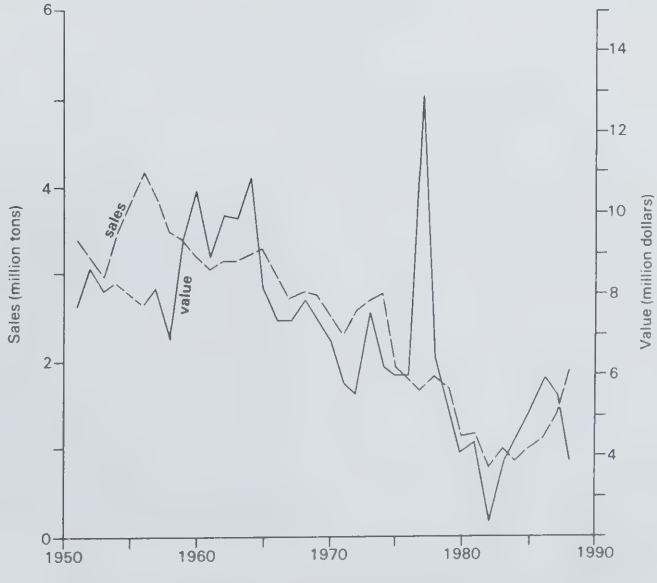


FIGURE 13.—Sales and value of clay in Ohio. Value line dashed where data not available.

## SHALE

Shale was produced by 16 companies at 26 operations in 15 Ohio counties during 1988. Production totalled 2,213,039 tons and sales totalled 2,209,314 tons. Tuscarawas, Franklin, Cuyahoga, Marion, and Mahoning Counties accounted for 89.1 percent of the total sales. The total value[8] of shale sold (including material for captive use) in 1988 was $2,692,026, with an average price per ton of $1.22.

An annual average of 34 employees worked an average of 157 days in 1988 mining shale. Total wages reported in 1988 for 34 production employees and 3 nonproduction employees were $806,475. The average annual wage, based on those employees for whom wages were reported, was $21,797. An additional 76 employees mined shale along with one or more other mineral commodities in 1988.

Shale mined in Ohio in 1988 was largely for captive use in the production of common clay products, construction, and lightweight aggregate.

[8]Includes reported and estimated values. See footnote 1, p. 8.

TABLE 26.—*1988 Ohio shale sales, by county and type*

| County | Tons sold | | | | | |
|---|---|---|---|---|---|---|
| | Total | Common clay products | Vitrified products | Cement manufacture | Lightweight aggregate | Other/ unspecified |
| Ashland | 971 | 971 | | | | |
| Columbiana | 58,100 | 57,625 | | | | 475 |
| Coshocton | 20,891 | | | | | 20,891 |
| Cuyahoga | 238,913 | | | | 238,913 | |
| Franklin | 655,600 | 335,600 | | | | 320,000 |
| Harrison | 38,250 | | 38,250 | | | |
| Hocking | 18,829 | | 18,829 | | | |
| Holmes | 6,737 | 2,400 | | | | 4,337 |
| Licking | 17,274 | | 17,274 | | | |
| Mahoning | 105,878 | | | 105,878 | | |
| Marion | 116,277 | 116,277 | | | | |
| Medina | 47,391 | 47,391 | | | | |
| Noble | 1,824 | 1,824 | | | | |
| Perry | 30,600 | | | | | 30,600 |
| Tuscarawas | 851,779 | 401,902 | 7,795 | | | 442,082 |
| TOTAL | 2,209,314 | 963,990 | 82,148 | 105,878 | 238,913 | 818,385 |

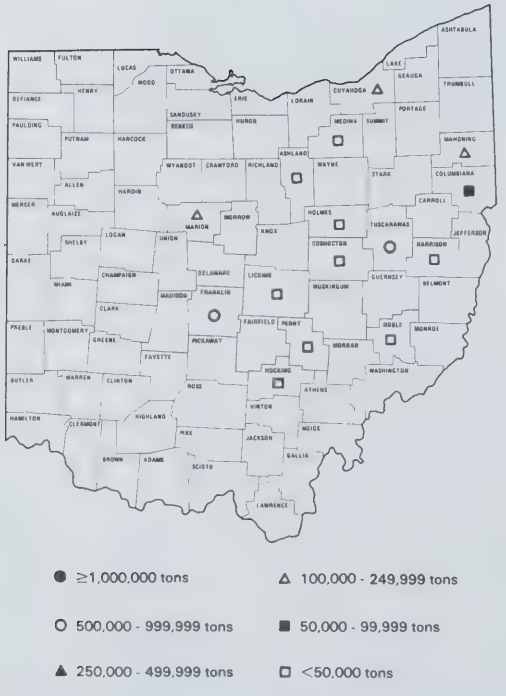


FIGURE 14.—Shale sales in Ohio in 1988, by county.

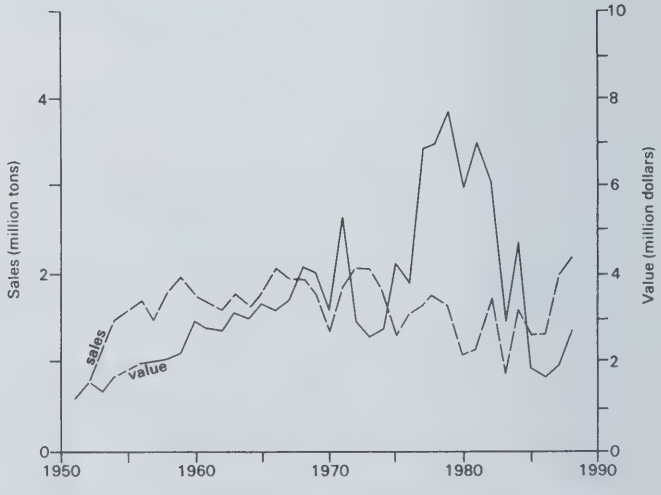


FIGURE 15.—Sales and value of shale in Ohio. Value line dashed where data not available.

## GYPSUM

Gypsum was produced by 1 company at 1 operation in Ottawa County during 1988. Gypsum production and sales (including material for captive use) totalled 239,828 tons. The reported value[9] of the gypsum sold was $2,278,366, with an average price per ton of $9.50.

An annual average of 13 employees worked an average of 329 days in 1988 producing gypsum. Total wages reported in 1988 for 13 production employees and 2 nonproduction employees were $460,483. The average annual wage in 1988 was $30,699.

## SALT

Salt was produced by 3 companies at 5 operations in 5 Ohio counties during 1988. Rock salt sales totalled 3,036,903 tons from 2 underground mines, one each in Cuyahoga and Lake Counties. Three brining operations, one each in Licking, Summit, and Wayne Counties, sold a total of 12,561 tons of salt in brine and 681,034 tons of evaporated salt. Reported known production of salt was 3,692,330 tons in 1988. Total sales of salt in 1988 amounted to 3,730,498 tons with a total value of $41,148,108. Average price per ton for all salt sold in 1988 was $11.03. Average price per ton of rock salt was $11.05 and of salt in brine and evaporated salt was $10.93.

An annual average of 138 employees worked an average of 307 days in 1988 to produce salt. Total reported wages in 1988 for 138 production employees and 172 nonproduction employees were $10,990,241. The average annual wage in 1988 was $35,452. The primary use for Ohio salt in 1988 was ice control.

## PEAT

Peat was produced by 4 companies at 4 operations in 4 Ohio counties during 1988. Peat sales (including material for captive use) totalled 24,577 tons, with Champaign, Richland, Ashland, and Williams Counties accounting for 100 percent of the total sales. The total value of the peat sold in 1988 was $114,763, with an average price per ton of $4.63. Reported known production was 33,181 tons.

No information was reported regarding employment, wages, or days in production.

Peat produced in Ohio was used for mulch, worm culture, and legume inoculation.

[9]Includes reported and estimated values. See footnote 1, p. 8.

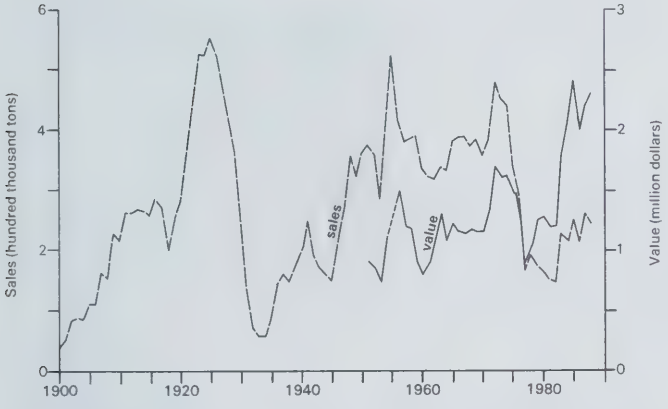


FIGURE 16.—Sales and value of gypsum in Ohio. Value line dashed where data not available. Some figures were calculated because actual figures were not reported in order to maintain confidentiality.

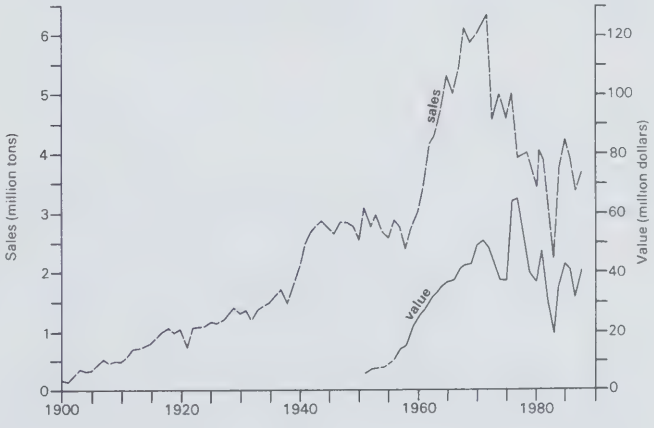


FIGURE 17.—Sales and value of salt in Ohio. Value line dashed where data not available.

Reclaimed sand and gravel pit of American Aggregates Corp., Franklin County. Photo taken during 1988 Ohio's Mineral Industries Teachers Workshop.

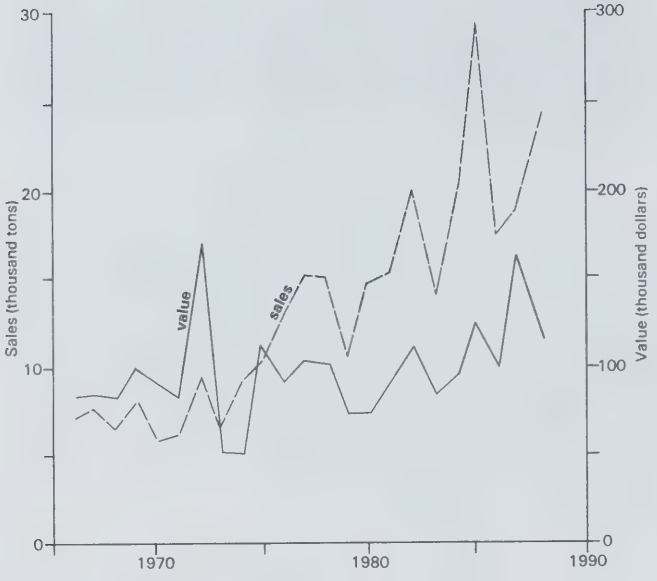


FIGURE 18.—Sales and value of peat in Ohio.

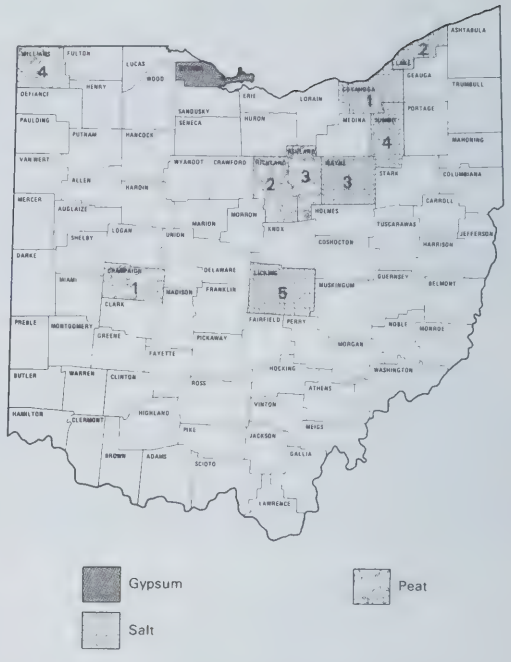


FIGURE 19.—Counties producing gypsum, salt, and peat in Ohio in 1988, and their ranking in sales.

## 1988 OHIO OIL AND GAS ACTIVITY

*This information on oil and gas is modified from M. P. McCormac, 1989, 1988 Ohio oil and gas developments: Ohio Department of Natural Resources, Division of Oil and Gas*

The Division of Oil and Gas issued 1,919 permits to drill for oil and gas in 1988. This total is the lowest recorded during the past decade and a decline of 21 percent from 1987. An estimated 1,334 wells were drilled in 1988, which is a decrease of 29 percent from 1987. This total is the lowest since 1975.

Wells were reported drilled in 46 of the 88 Ohio counties during 1988, but only 43 counties had reported completions. The Division of Oil and Gas received 1,117 completion reports in 1988. These reports indicate that 998 wells, or 89.3 percent, were productive and 119 were dry holes; completion rate was 89.4 percent. The total footage of new wells completed in 1988 was 4,607,827 feet, compared to 5,513,636 feet in 1987. The average depth per well drilled was 4,125 feet, which is a 3.5 percent increase compared to the 1987 average.

Please note that table 27 now lists development and exploratory wells. Because of the unreliability of initial-production information, the Division of Oil and Gas has eliminated the distinction between new oil, gas, and combination wells.

A total of 78 completions in 1988 were classified as exploratory wells; 19 of the exploratory wells were productive and 59 were dry holes, for a productive rate of 24.4 percent. The Ordovician Rose Run and Cambrian Trempealeau zones accounted for 86 percent of the exploratory wells in Ohio in 1988.

The "Clinton" sandstone (Silurian) has been the most actively drilled zone every year since 1965. During 1988, 818 wells were drilled to the "Clinton"; this figure represents 73.2 percent of all wells completed in Ohio in 1988. Wells drilled to the "Clinton" had a 98.4 percent productive rate. The number of completions in the "Clinton" in 1988 was the lowest since 1966. The average depth of wells drilled to the "Clinton" was 4,407 feet.

The Berea Sandstone ("1st and 2nd Berea," Mississippian) was the second most actively drilled formation in 1988. During the year 86 wells were completed in the Berea; these wells represent 7.7 percent of all wells completed in Ohio in 1988. Wells drilled to the Berea had a 95.4 percent productive rate. Morgan and Noble Counties had the most Berea completions, with 27 and 17 wells, respectively.

The number of wells drilled to the Ordovician Rose Run sandstone in 1988 was 70, an increase from 62 in 1987. Rose Run wells were drilled in 11 counties in 1988, compared to 4 counties in 1987. Coshocton County led the Rose Run drilling activity with 33 wells, followed by Geauga and Holmes Counties with 10 wells each.

A total of 60 wells were drilled to the Cambrian Trempealeau dolomite. Morrow (41 wells) and Richland (11 wells) Counties accounted for 86.7 percent of all Trempealeau wells. The percentage of productive Cambrian wells in 1988 was 31.1 percent.

Interest in the Ohio Shale (Devonian) increased slightly

in 1988. The 43 wells drilled to the Ohio Shale in 1988 were all productive.

There was a significant increase in the number of plug-back and drill-deeper operations in 1988. Forty-seven new wells which were dry in their permitted formation were plugged back to a shallower producing zone; 42 of these wells were plugged back from the Rose Run sandstone to the "Clinton" sandstone. In addition, 15 existing wells were plugged back to shallower producing zones.

Well-completion reports indicate that Washington County again had the most diverse drilling activity. Wells were drilled to five different geologic zones ranging from the Silurian "Clinton" to the Pennsylvanian "Maxton."

Eight of the 10 most active counties in 1988 were in northeastern Ohio. Trumbull County was first with 90 new wells drilled (86 completions reported). For the first time since 1961 the 1st-ranked county had fewer than 100 wells drilled. Coshocton County was in second place with 81 new wells drilled (66 completions reported). Seven of the top-10 counties in 1987 retained their top-10 status in 1988. Morrow (5th place) and Monroe (7th place) Counties returned to the top-10 rankings for the first time since 1968. Washington County was not in the top 10 for the first time since 1976. Columbiana and Stark Counties also were absent from the 1988 list of the 10 most active counties.

The total reported crude oil production in Ohio for 1988 was 11,710,728 barrels, a decline of 3.6 percent from 1987. The 1988 production volume is the lowest recorded in 10 years. The dollar value of the crude oil produced in Ohio in 1988 was $177,987,753. Although production declined only 3.6 percent from 1987, low crude-oil prices resulted in a 16 percent decrease in the dollar value. The average price per barrel was $15.20, a 12.8 percent decrease from 1987.

Natural gas production in Ohio during 1988 was 166,690,130 MCF, a slight (0.06 percent) increase from 1987. This figure includes an estimated 1,634,217 MCF of gas utilized on the lease. The dollar value of the natural gas produced in Ohio in 1988 was $425,200,887, a decrease of only $502,010 from 1987. The value of the estimated volume of gas utilized on the lease was not used in computing this value. The average price paid per MCF in 1988 was $2.55, only $0.01 less than the 1987 price.

The combined total value of Ohio's 1988 crude oil and natural gas production was $603,188,640, a decrease of 5.0 percent ($34,391,029) from 1987. The 1988 total market value is the lowest since 1979.

The Division of Oil and Gas issued 1,783 plugging permits during 1988; this figure represents an increase of only 74 permits from 1987. During 1988, 1,255 wells were plugged. The number of plugging permits issued and the number of wells actually plugged during 1988 are the highest totals since the Division began keeping records in 1965. The increased plugging activity in 1988 is a continuation of a trend which began in 1982 as drilling activity began to decline. The ratio of wells completed to wells plugged in 1988 was 1.1 to 1, the lowest in the past decade. This ratio has declined steadily since the decade-high ratio of 21.3 to 1 in 1981.

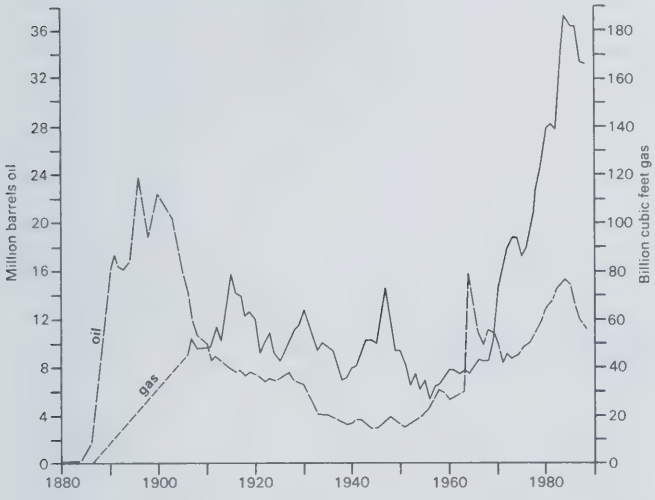


FIGURE 20.—Production of oil and gas in Ohio.

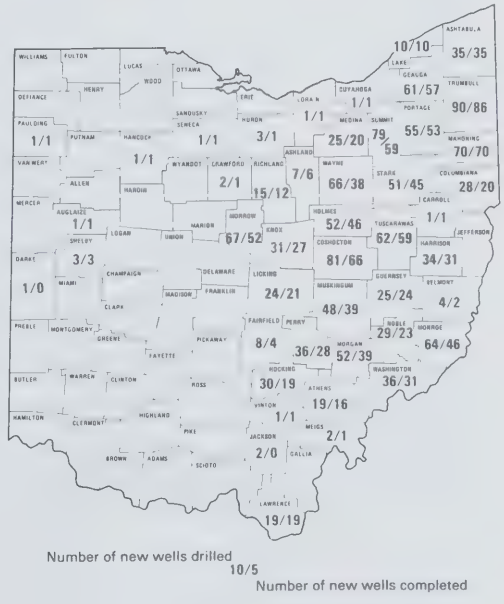


FIGURE 21.—New wells drilled for oil and gas in 1988, by county.

TABLE 27.—*1988 Ohio summary of new oil and gas well completions by county*[1]

| County[2] | Development wells | | Exploratory wells | | Total wells | Percent productive | Drilled footage | | |
|---|---|---|---|---|---|---|---|---|---|
| | Productive | Dry | Productive | Dry | | | Productive | Dry | Total |
| Ashland | 6 | 0 | 0 | 0 | 6 | 100.00 | 4,014 | 0 | 4,014 |
| Ashtabula | 32 | 1 | 1 | 1 | 35 | 94.29 | 117,521 | 12,492 | 130,013 |
| Athens | 14 | 2 | 0 | 0 | 16 | 87.50 | 31,338 | 1,770 | 33,108 |
| Auglaize | 1 | 0 | 0 | 0 | 1 | 100.00 | 1,420 | 0 | 1,420 |
| Belmont | 1 | 1 | 0 | 0 | 2 | 50.00 | 2,553 | 2,137 | 4,690 |
| Carroll | 1 | 0 | 0 | 0 | 1 | 100.00 | 5,522 | 0 | 5,522 |
| Columbiana | 20 | 0 | 0 | 0 | 20 | 100.00 | 115,340 | 0 | 115,340 |
| Coshocton | 40 | 11 | 0 | 15 | 66 | 60.61 | 181,504 | 182,187 | 363,691 |
| Crawford | 0 | 0 | 0 | 1 | 1 | 0.00 | 0 | 3,572 | 3,572 |
| Cuyahoga | 0 | 1 | 0 | 0 | 1 | 0.00 | 0 | 3,600 | 3,600 |
| Fairfield | 3 | 0 | 0 | 1 | 4 | 75.00 | 8,138 | 4,815 | 12,953 |
| Geauga | 48 | 3 | 1 | 5 | 57 | 85.96 | 207,111 | 54,201 | 261,312 |
| Guernsey | 22 | 0 | 0 | 2 | 24 | 91.67 | 110,720 | 14,344 | 125,064 |
| Hancock | 0 | 0 | 0 | 1 | 1 | 0.00 | 0 | 1,941 | 1,941 |
| Harrison | 31 | 0 | 0 | 0 | 31 | 100.00 | 186,487 | 0 | 186,487 |
| Hocking | 19 | 0 | 0 | 0 | 19 | 100.00 | 59,482 | 0 | 59,482 |
| Holmes | 35 | 2 | 6 | 3 | 46 | 89.13 | 172,794 | 32,228 | 205,022 |
| Huron | 1 | 0 | 0 | 0 | 1 | 100.00 | 960 | 0 | 960 |
| Knox | 25 | 2 | 0 | 0 | 27 | 92.59 | 66,767 | 5,580 | 72,347 |
| Lake | 10 | 0 | 0 | 0 | 10 | 100.00 | 32,858 | 0 | 32,858 |
| Lawrence | 16 | 3 | 0 | 0 | 19 | 84.21 | 13,422 | 2,605 | 16,027 |
| Licking | 18 | 1 | 0 | 2 | 21 | 85.71 | 47,009 | 8,043 | 55,052 |
| Lorain | 1 | 0 | 0 | 0 | 1 | 100.00 | 723 | 0 | 723 |
| Mahoning | 69 | 0 | 1 | 0 | 70 | 100.00 | 382,063 | 0 | 382,063 |
| Marion | 0 | 0 | 0 | 0 | 0 | 0.00 | 0 | 577 | 577 |
| Medina | 18 | 2 | 0 | 0 | 20 | 90.00 | 62,241 | 6,695 | 68,936 |
| Meigs | 1 | 0 | 0 | 0 | 1 | 100.00 | 1,905 | 0 | 1,905 |
| Monroe | 46 | 0 | 0 | 0 | 46 | 100.00 | 111,005 | 0 | 111,005 |
| Morgan | 36 | 2 | 1 | 0 | 39 | 94.87 | 98,464 | 4,548 | 103,012 |
| Morrow | 21 | 21 | 4 | 6 | 52 | 48.08 | 77,093 | 99,957 | 177,050 |
| Muskingum | 36 | 0 | 0 | 3 | 39 | 92.31 | 149,561 | 19,524 | 169,085 |
| Noble | 21 | 2 | 0 | 0 | 23 | 91.30 | 51,012 | 6,913 | 57,925 |
| Paulding | 0 | 0 | 0 | 1 | 1 | 0.00 | 0 | 1,900 | 1,900 |
| Perry | 27 | 1 | 0 | 0 | 28 | 96.43 | 88,988 | 1,198 | 90,186 |
| Portage | 51 | 0 | 0 | 2 | 53 | 96.23 | 229,111 | 11,182 | 240,293 |
| Richland | 2 | 2 | 0 | 8 | 12 | 16.67 | 8,208 | 40,720 | 48,928 |
| Seneca | 0 | 0 | 0 | 1 | 1 | 0.00 | 0 | 2,352 | 2,352 |
| Shelby | 0 | 0 | 0 | 3 | 3 | 0.00 | 0 | 5,825 | 5,825 |
| Stark | 45 | 0 | 0 | 0 | 45 | 100.00 | 208,749 | 0 | 208,749 |
| Summit | 57 | 0 | 2 | 0 | 59 | 100.00 | 233,088 | 0 | 233,088 |
| Trumbull | 84 | 1 | 1 | 0 | 86 | 98.84 | 397,287 | 3,966 | 401,253 |
| Tuscarawas | 55 | 0 | 1 | 3 | 59 | 94.92 | 288,472 | 22,329 | 310,801 |
| Vinton | 1 | 0 | 0 | 0 | 1 | 100.00 | 2,595 | 0 | 2,595 |
| Washington | 30 | 1 | 0 | 0 | 31 | 96.77 | 144,252 | 6,491 | 150,743 |
| Wayne | 35 | 1 | 1 | 1 | 38 | 94.74 | 132,597 | 11,761 | 144,358 |
| TOTAL | 979 | 60 | 19 | 59 | 1,117 | 89.35 | 4,032,374 | 575,453 | 4,607,827 |

[1]The Division of Oil and Gas has eliminated the distinction between new oil, gas, and combination wells because of the unreliability of initial-production information.

[2]No well completions were reported for the following counties in 1988: Adams, Allen, Brown, Butler, Champaign, Clark, Clermont, Clinton, Darke, Defiance, Delaware, Erie, Fayette, Franklin, Fulton, Gallia, Greene, Hamilton, Hardin, Henry, Highland, Jackson, Jefferson, Logan, Lucas, Madison, Marion, Mercer, Miami, Montgomery, Ottawa, Pickaway, Pike, Preble, Putnam, Ross, Sandusky, Scioto, Union, Van Wert, Warren, Williams, Wood, and Wyandot.

The following counties reported drilling, but no completion reports were filed in 1988: Darke and Jackson.

TABLE 28.—*1988 Ohio summary of new oil and gas well completions by producing zone*

| Producing zone | No. of producing wells | No. of dry holes | Total no. of wells | Total footage | Percent productive |
|---|---|---|---|---|---|
| Pennsylvanian undifferentiated | 17 | 6 | 23 | 18,981 | 73.91 |
| Upper Mississippian undifferentiated | 2 | 0 | 2 | 2,768 | 100.00 |
| Lower Mississippian "1st & 2nd Berea" | 82 | 4 | 86 | 139,204 | 95.35 |
| Devonian | | | | | |
| Ohio Shale | 43 | 0 | 43 | 102,923 | 100.00 |
| "Big Lime" | 9 | 2 | 11 | 17,227 | 81.82 |
| Oriskany | 0 | 0 | 0 | 0 | 0 |
| Silurian | | | | | |
| "Newburg" | 0 | 0 | 0 | 0 | 0 |
| "Clinton-Medina" | 805 | 13 | 818 | 3,604,690 | 98.41 |
| Lower Ordovician Trenton-Rose Run | 21 | 52 | 73 | 490,329 | 28.77 |
| Cambrian undifferentiated | 19 | 42 | 61 | 231,705 | 31.15 |
| Precambrian | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 998 | 119 | 1,117 | 4,607,827 | 89.35 |

TABLE 29.—*Ten most active counties in Ohio in 1988*

| 1988 Rank | County | 1987 Rank | No. of wells drilled | No. of completions reported | No. of permits issued | Total footage drilled |
|---|---|---|---|---|---|---|
| 1 | Trumbull | 8 | 90 | 86 | 93 | 401,253 |
| 2 | Coshocton | 3 | 81 | 66 | 93 | 363,691 |
| 3 | Summit | 2 | 79 | 59 | 124 | 233,088 |
| 4 | Mahoning | 4 | 70 | 70 | 110 | 382,063 |
| 5 | Morrow | 12 | 67 | 52 | 74 | 177,050 |
| 6 | Wayne | 6 | 66 | 38 | 104 | 144,358 |
| 7 | Monroe | 24 | 64 | 46 | 103 | 111,005 |
| 8 | Tuscarawas | 1 | 62 | 59 | 69 | 310,801 |
| 9 | Geauga | 11 | 61 | 57 | 75 | 261,312 |
| 10 | Portage | 9 | 55 | 53 | 75 | 240,293 |

TABLE 30.—*Ohio well permits issued vs. number of wells drilled and completed, 1979-1988*

| Year | No. of well permits issued[1] | No. of wells drilled and completed[2] |
|---|---|---|
| 1979 | 6,325 | 3,657 |
| 1980 | 9,718 | 5,093 |
| 1981 | 11,352 | 6,082 |
| 1982 | 8,042 | 4,814 |
| 1983 | 8,228 | 4,288 |
| 1984 | 8,565 | 4,958 |
| 1985 | 6,440 | 3,743 |
| 1986 | 2,440 | 1,841 |
| 1987 | 2,425 | 1,385 |
| 1988 | 1,919 | 1,117[3] |

[1]*No. of well permits issued* represents new and reissued permits.

[2]*No. of wells drilled and completed* provided by the American Petroleum Institute from 1979 to 1987; 1988 data based on completion reports filed with the Division of Oil and Gas.

[3]Although 1,117 wells were reported as completed in 1988, the Division of Oil and Gas estimates 1,334 wells were drilled in 1988.

TABLE 31.—*Ohio crude oil and gas production and reserves, 1978-1988*

| Year | Oil | | Gas | |
|---|---|---|---|---|
| | Production[1] (thousand barrels) | Reserves[2] (thousand barrels) | Production[1] (thousand MCF) | Reserves[2] (thousand MCF) (exclusive of storage) |
| 1978 | 11,154 | 131,194 | 115,239 | 1,177,511 |
| 1979 | 11,953 | 137,718 | 124,665 | 1,313,333 |
| 1980 | 12,928 | 116,000 | 138,856 | 1,436,629 |
| 1981 | 13,551 | 112,000 | 141,134 | 1,689,745 |
| 1982 | 14,571 | 111,000 | 138,391 | 1,730,691 |
| 1983 | 14,971 | 130,000 | 151,300 | 1,557,708 |
| 1984 | 15,271 | 116,000 | 186,480 | 1,405,681 |
| 1985 | 14,988 | 79,000 | 182,245 | 1,585,925 |
| 1986 | 13,442 | 72,000 | 182,072 | 1,578,177 |
| 1987 | 12,152 | 66,000 | 166,593 | 1,539,620 |
| 1988 | 11,711 | [3] | 166,690[4] | 1,457,955 |

[1]Production figures compiled by Ohio Oil and Gas Association.
[2]Oil reserve figures based on data from American Petroleum Institute (1977-1979) and U.S. Department of Energy, Energy Information Administration (1980-1987). Gas reserve figures based on data from U.S. Bureau of Mines and U.S. Department of Energy, Energy Information Administration.
[3]Figure not available.
[4]Included in this total is an estimated 1,634,217 MCF of gas utilized on the lease.

TABLE 32.—*Ohio counties[1] and their state mine number abbreviations[2]*

| *County* | *Abbreviation* | *County* | *Abbreviation* | *County* | *Abbreviation* |
|---|---|---|---|---|---|
| Adams | Ads | Hamilton | Hmn | Noble | Ne |
| Allen | An | Hancock | Hk | Ottawa | Oa |
| Ashland | Ald | Hardin | Hdn | Paulding | Pg |
| Ashtabula | Asa | Harrison | Hn | Perry | Py |
| Athens | As | Henry | Hy | Pickaway | Pky |
| Auglaize | Ae | Highland | Hd | Pike | Pke |
| Belmont | Bt | Hocking | Hg | Portage | Pe |
| Brown | Bn | Holmes | Hs | Preble | Pre |
| Butler | Br | Huron | Hrn | Putnam | Pm |
| Carroll | Cl | Jackson | Jkn | Richland | Rd |
| Champaign | Cpn | Jefferson | Jfn | Ross | Rs |
| Clark | Ck | Knox | Kx | Sandusky | Sy |
| Clermont | Ct | Lake | Lke | Scioto | So |
| Clinton | Cln | Lawrence | Le | Seneca | Sa |
| Columbiana | Ca | Licking | Lg | Shelby | Shy |
| Coshocton | Cn | Logan | Lgn | Stark | Sk |
| Crawford | Cd | Lorain | Ln | Summit | St |
| Cuyahoga | Cya | Lucas | Ls | Trumbull | Tl |
| Darke | Dke | Madison | Mdn | Tuscarawas | Ts |
| Defiance | De | Mahoning | Mg | Union | Un |
| Delaware | Del | Marion | Mn | Van Wert | Vt |
| Erie | Ee | Medina | Ma | Vinton | Vn |
| Fairfield | Fd | Meigs | Ms | Warren | Wan |
| Fayette | Fe | Mercer | Mr | Washington | Wn |
| Franklin | Fn | Miami | Mi | Wayne | We |
| Fulton | Ftn | Monroe | Me | Williams | Ws |
| Gallia | Ga | Montgomery | My | Wood | Wd |
| Geauga | Gea | Morgan | Mon | Wyandot | Wt |
| Greene | Ge | Morrow | Mw | | |
| Guernsey | Gy | Muskingum | Mum | | |

[1]Brown, Fulton, and Madison Counties reported no production or sales of mineral commodities in 1988.
[2]As used for Division of Mines mine numbers.

## 1988 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|
| A.I.R. Construction & Reclamation, Inc.<br>P.O. Box 43<br>Crooksville, OH 43731<br>614-342-4732<br>Gary L. Allen, pres. | Drakes (497) | Perry | 61,393 | Py-340 | D-0783 |
| Amerikohl Mining, Inc.<br>202 Sunset Dr.<br>Butler, PA 16001<br>412-282-2839<br>John M. Stilley, pres. | Lindsay (476) | Columbiana | 29,340 | Ca-976 | D-0588 |
| Anthony Mining Co., Inc.<br>P.O. Box 1298<br>Steubenville, OH 43952<br>614-282-7811<br>Joseph J. Sperlazza, pres. | Pipo #51 (189)<br>Maine 307 (190) | Jefferson<br>Jefferson | 51,623<br>101,310 | Jfn-788<br>Jfn-789 | D-0327<br>D-0307 |
| Avis Coal Co.<br>P.O. Box 1230<br>Zanesville, OH 43702-1230<br>614-454-2583<br>James F. Graham, pres. | Avis Coal Co. (383) | Athens | 134,875 | As-A[1] | D-0557 |
| B. & D. Coal, Inc.<br>P.O. Box 134<br>Hamden, OH 45634<br>614-384-3404<br>Jerald B. Eberts, pres. | B. & D. Coal #2 (169)<br>B. & D. Coal #1 (298) | Jackson<br>Vinton | 7,938<br>56,502 | Jkn-570<br>Vn-623 | D-0207<br>D-0294 |
| B & N Coal, Inc.<br>P.O. Box 100<br>Dexter City, OH 45727<br>614-783-3575<br>Gilbert Baker, pres. | Pipeline (230)<br>Guiler (231)<br>Magazine (494)<br>Shevlin (495)<br>Shilling (493)<br>Ullman (514)<br>Shook (303)<br>Lincoln (304) | Noble<br>Noble<br>Noble<br>Noble<br>Noble<br>Washington<br>Washington<br>Washington | 11,178<br>259,835<br>13,018<br>7,088<br>89,508<br>5,954<br>42,901<br>110,875 | Ne-137<br>Ne-146<br>Ne-149<br>Ne-150<br>Ne-1008<br>Ne-151<br>Wn-1004<br>Wn-1005 | D-0329<br>D-0343<br>D-0786<br>D-0787<br>D-0706<br>D-0807<br>D-0209<br>D-0183, D-0511 |
| Bannock Coal Co.<br>43249 Harrah St.<br>P.O. Box 98<br>Lafferty, OH 43951<br>614-968-3582<br>Tony Gentile, pres. | Shippy (311) | Belmont | 17,472 | Bt-1147 | D-0590 |
| Beaver Creek, Inc.<br>7219 Salem-Unity Rd.<br>Salem, OH 44460<br>216-336-3534<br>Delyte DeYarmon, pres. | Beaver Creek, Inc. (392) | Columbiana | 4,993 | Ca-855 | IM-891 |
| Belville Mining Co., Inc.<br>P.O. Box 834<br>Ironton, OH 45638<br>614-643-2331<br>Thomas J. Belville, pres. | Brady Creek (202)<br>Brady Creek (491) | Lawrence<br>Lawrence | 28,513<br>81,116 | Le-432<br>Le-450 | D-0536<br>D-0746 |
| Benedict, Inc.<br>P.O. Box 315<br>McArthur, OH 45651<br>614-596-5226<br>W. E. Engle, pres. | Mitchell Hollow (357)<br>Waldron Pit (419)<br>Allied West (420)<br>Austin Pit (423) | Vinton<br>Vinton<br>Vinton<br>Vinton | 3,314<br>45,623<br>126,753<br>100,660 | Vn-172<br>Vn-183<br>Vn-184<br>Vn-187 | D-0445<br>D-0633<br>D-0609<br>D-0672 |
| Black Rock, Ltd.<br>P.O. Box 2848<br>Zanesville, OH 43701<br>614-454-6863<br>Thomas F. Sands, pres. | Black Rock, Ltd. (492) | Muskingum | 24,521 | Mum-268 | D-0254 |
| Blum Coal Co.<br>Scio-Carrollton Rd.<br>P.O. Box 232<br>Carrollton, OH 44615-0232<br>216-627-2670<br>Raymond Blum, owner | DeAngelo Pit (321)<br>Jackson-Strabula Job (470)<br>Minick Job (471) | Columbiana<br>Columbiana<br>Columbiana | 17,129<br>9,170<br>11,686 | Ca-938<br>Ca-944<br>Ca-950 | IM-937<br>IM-951<br>D-0768 |
| Boich Mining Co.<br>P.O. Box 148<br>Bloomingdale, OH 43910<br>614-733-7311<br>Abe Bryan, pres. | Boich Mining Co. (178) | Jefferson | 338,067 | Jfn-528 | D-0247, D-0563, D-0665 |

[1]No mine number has been assigned by the Division of Mines.

## 1988 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|
| David Boyle, Inc.<br>2020 Airport Rd.<br>New Lexington, OH 43764<br>614-342-2059<br>David R. Boyle, pres. | No. 1 Strip (330) | Hocking | 6,179 | Hg-321 | D-0531 |
| Buckeye-Industrial Mining Co.<br>P.O. Box 389<br>Lisbon, OH 44432<br>216-337-9511<br>John C. Grisham, pres. | Gamber (446) | Carroll | 38,792 | Cl-235 | D-0693 |
| | Myers (447) | Carroll | 168,099 | Cl-238 | D-0703 |
| | Greer (466) | Carroll | 24,620 | Cl-242 | D-0751 |
| | R & T (467) | Carroll | 21,674 | Cl-243 | D-0805 |
| | Vincent (448) | Columbiana | 6,234 | Ca-960 | D-0694 |
| | Ohio WV/Sheridan Mine (435) | Columbiana | 581,125 | Ca-963 | D-0532 |
| | Witherow (474) | Columbiana | 16,788 | Ca-965 | D-0591 |
| | Roberts (366) | Stark | 207,780 | Sk-236 | D-0632 |
| | Dobransky (407) | Stark | 72,609 | Sk-237 | D-0653 |
| C. K. & K., Inc.<br>Rte. 4 Box 4600<br>New Philadelphia, OH 44663<br>614-922-0797<br>Ronald M. Garrett, pres. | C. K. & K., Inc. #1 (351) | Tuscarawas | 25,304 | Ts-1974 | D-0580 |
| | C. K. & K., Inc. #2 (434) | Tuscarawas | 29,107 | Ts-1993 | D-0709 |
| Center Mining Co.<br>6950 State Rte. 164<br>Lisbon, OH 44432<br>216-424-3938<br>Robert Ullom & Richard Morlan, partners | C. Ullom (431) | Columbiana | 4,510 | Ca-961 | D-0697 |
| Central Ohio Coal Co.<br>P.O. Box 98<br>Cumberland, OH 43732<br>614-962-2013<br>J. E. Katlic, exec. v. pres. | Muskingum Mine (228) | Muskingum, Noble | 3,400,534 | Ne-41 | D-0056, D-0127, D-0261, D-0559, D-0678, IM-921 |
| Churchill Enterprises, Inc.<br>39140 Churchill Rd.<br>Lisbon, OH 44432<br>216-424-5113<br>Robert Johnson, pres. | Churchill Enterprises, Inc. (394) | Columbiana | 1,316 | Ca-946 | IM-960 |
| Coalbrook Mining, Inc.<br>42891 Kelly Park Rd.<br>Columbiana, OH 44408<br>216-482-2365<br>Wilmer A. Davis, pres. | Carle & Oyster (396) | Columbiana | 30,400 | Ca-962 | D-0658 |
| Commercial Minerals, Inc.<br>10900 South Ave.<br>P.O. Box 217<br>North Lima, OH 44452-0217<br>216-424-1463<br>W. T. Mackall, pres. | West Point (98) | Columbiana | 87,455 | Ca-919 | D-0048, D-0412 |
| | Morris (472) | Columbiana | 17,004 | Ca-951 | D-0741 |
| | Hahn (436) | Columbiana | 11,503 | Ca-957 | D-0670 |
| Consolidation Coal Co.<br>Eastern Region<br>Cadiz, OH 43907<br>614-458-1381<br>Ben Statler, v. pres. | Franklin 125 (137) | Belmont, Harrison | 751,777 | Hn-203 | D-0174, D-0323 |
| | Mahoning Valley (150) | Belmont, Harrison | 575,811 | Hn-700 | D-0018, D-0030, D-0051, D-0054, D-0334, D-0414, D-0452, D-0784 |
| Cravat Coal Co.<br>40580 Cadiz-Piedmont Rd.<br>Cadiz, OH 43907<br>614-942-4656<br>Anthony Puskarich, pres. | Kriechbaum Pit (4) | Belmont | 37,048 | Bt-78 | IM-733 |
| | Sandy Ridge Pit (47) | Belmont | 3,989 | Bt-1118 | D-0396 |
| | Hendrysburg West (52) | Belmont | 2,583 | Bt-1131 | D-0507 |
| | Barnesville Pit (309) | Belmont | 48,033 | Bt-1143 | D-0573 |
| | Neffs Pit (429) | Belmont | 8,339 | Bt-1160 | D-0645 |
| | Puskarich Farm Pit (430) | Harrison | 77,357 | Hn-232 | D-0717 |
| | Shep-Can Pit (480) | Harrison | 56,074 | Hn-233 | D-0752 |
| | Seven Pit (347) | Tuscarawas | 5,515 | Ts-1970 | D-0562 |
| Crawford Coal Co.<br>605 W. Lincoln Way<br>Lisbon, OH 44432<br>216-424-7366<br>Raymond & R. Ronald Crawford, partners | Crawford Coal Co. (77) | Columbiana | 2,835 | Ca-827 | D-0243 |
| Crooksville Coal Co., Inc.<br>P.O. Box 149<br>Crooksville, OH 43731<br>614-982-6651<br>Ralph L. Allen, pres. | Crooksville Strip (239) | Perry | 286,549 | Py-317 | D-0057, D-0085, D-0189 |

## 1988 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|
| D. & D. Mining Co.<br>3379 E. Garfield Rd.<br>New Springfield, OH 44443<br>216-549-3127<br>Donald Thompson, pres. | Saviers Mine (441)<br>Jack Foster (82)<br>Dickson (85)<br>Lyons Pit (86) | Columbiana<br>Columbiana<br>Columbiana<br>Columbiana | 89,220<br>4,020<br>19,812<br>4,059 | Ca-348<br>Ca-872<br>Ca-888<br>Ca-891[2] | IM-976<br>D-0137<br>D-0379<br>D-0032 |
| D & L Contractors, Inc.<br>P.O. Box 446<br>Flushing, OH 43977<br>614-968-4913<br>Walter Dombroski, pres. | D & L Strip (185) | Jefferson | 106,202 | Jfn-780 | D-0126 |
| Daron Coal Co., Inc.<br>Rte. 1 Box 167<br>Dennison, OH 44621<br>614-922-6829<br>Ronald Selway, pres. | Harstine (274)<br>Pleasant Valley Mine (433) | Tuscarawas<br>Tuscarawas | 905<br>158,304 | Ts-1924<br>Ts-1991 | D-0080<br>D-0702 |
| Dennis Clay Co.<br>State Rte. 37<br>P.O. Box 10922<br>New Lexington, OH 43764<br>614-342-5269<br>Tom L. Dennis, owner | Buzzard Glory Mine (339) | Perry | 15,304 | Py-331 | IM-920 |
| East Fairfield Coal Co.<br>10900 South Ave.<br>P.O. Box 217<br>North Lima, OH 44452-0217<br>216-549-2165<br>R. E. Mackall, pres. | Franklin Square (74)<br>"J" Mine (322)<br>"M" Mine (475)<br>"HP" Mine (211) | Columbiana<br>Columbiana<br>Columbiana<br>Mahoning | 18,829<br>12,973<br>30,101<br>154,113 | Ca-344<br>Ca-953<br>Ca-968<br>Mg-626 | D-0364<br>D-0539<br>D-0760<br>D-0468 |
| East Ohio Limestone Co.<br>P.O. Box 699<br>Hartville, OH 44632<br>216-877-2636<br>Donald D. Phillips, partner | East Ohio Limestone Co. (255) | Stark | 23,877 | Sk-663 | IM-5 |
| Eberhart Coal, Inc.<br>Rte. 3 Box 89<br>Dover, OH 44622-9507<br>216-343-5677<br>Phillip H. Eberhart, pres. | Eberhart #2 Hott Strip (259)<br>Eberhart #2 Hott Strip (403)<br>Eberhart #2 Hott Strip (425)<br>Eberhart #2 Hott Strip (503) | Tuscarawas<br>Tuscarawas<br>Tuscarawas<br>Tuscarawas | 25,849<br>9,146<br>10,298<br>48,942 | Ts-1526<br>Ts-1992<br>Ts-1994<br>Ts-1998 | D-0330<br>D-0685<br>IM-985<br>D-0735 |
| R. A. Eberts Co., Inc.<br>P.O. Box 191<br>Jackson, OH 45650<br>614-286-2975<br>Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners | McArthur Pit (294) | Vinton | 238,328 | Vn-163 | D-0210 |
| Elk Coal, Inc.<br>P.O. Box 165<br>McArthur, OH 45651<br>614-596-2132<br>John L. Cline, pres. | Bowling Strip (171) | Jackson | 53,735 | Jkn-576 | D-0204 |
| Empire Coal Co.<br>P.O. Box 729<br>Gnadenhutten, OH 44629<br>614-254-4395<br>Bruce Work, pres. | Empire Coal Co. (256)<br>Anco Strip (291)<br>Hopkins-Myers (409)<br>Dichler-Riggle (292) | Tuscarawas<br>Tuscarawas<br>Tuscarawas<br>Tuscarawas | 340,132<br>71,591<br>17,367<br>82,923 | Ts-115<br>Ts-1963<br>Ts-1949<br>Ts-1964 | D-0190, D-0217, D-0398, D-0715<br>D-0512<br>D-0394<br>D-0516 |
| ENZ, Inc.<br>Rte. 1 Box 444<br>Dover, OH 44622<br>216-364-8621<br>Michael J. Nugo, pres. | Sickafoose Pit (246) | Stark | 59,392 | Sk-208 | D-0295 |
| F. & M. Coal Co.<br>Costonia Rd. Box 171<br>Toronto, OH 43964<br>614-544-5203<br>Edward Fiala, owner | F. & M. Strip (186) | Jefferson | 23,278 | Jfn-784 | D-0728 |
| Fairpoint Coal Co.<br>P.O. Box 158<br>Fairpoint, OH 43927<br>614-695-3174<br>Louie Zaccagnini, pres. | Mel-Worth (19)<br>Shepardstown (139) | Belmont<br>Belmont, Harrison | 5,199<br>15,716 | Bt-927<br>Hn-205 | D-0483<br>D-0155 |
| G & M Mineral Co.<br>P.O. Box 345<br>Berlin, OH 44610<br>216-893-2721<br>Walter Gary, pres. | G & M Mineral Co. (106)<br>G & M Mineral Co. (445) | Coshocton<br>Coshocton | 8,975<br>33,453 | Cn-757<br>Cn-823 | D-0477<br>D-0714 |

[2]This mine was operated 1st quarter 1988 by D. & D. Mining Co. and 2nd through 4th quarters by John Glenn Mining.

## 1988 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|
| GEX Hardy, Inc.<br>P.O. Box 340<br>Sugarcreek, OH 44681<br>216-852-2431<br>J. J. Blazer, pres. | Flushing (33) | Belmont | 22,799 | Bt-1099 | D-0244, D-0291 |
| John Glenn Mining<br>6556 State Rte. 45<br>Lisbon, OH 44432<br>216-424-5945<br>John Glenn, owner | Lyons Pit (86)<br>Dawson (473) | Columbiana<br>Columbiana | 277<br>19,139 | Ca-891[3]<br>Ca-952 | D-0032<br>D-0764 |
| Green & Son Coal Co.<br>P.O. Box 422<br>Wellston, OH 45692<br>614-384-5780<br>Wayne & Gary Green, owners | Green Strip II (418) | Vinton | 53,983 | Vn-182 | D-0631 |
| Hillcrest Coal, Ltd.<br>190 S. Main St.<br>Magnolia, OH 44643<br>216-866-9388<br>Kermit & Richard James, Jr., partners | Hillcrest Coal, Ltd. (250) | Stark | 11,862 | Sk-221 | D-0380 |
| Hocking Valley Mining<br>36806 Maysville-Greendale Rd.<br>Logan, OH 43138<br>614-385-6267<br>Kevin J. Boyle, pres. | Hocking Valley Mining (483) | Hocking | 16,101 | Hg-324 | D-0754 |
| Holmes Limestone Co.<br>P.O. Box 295<br>Berlin, OH 44610<br>216-893-2721<br>E. E. Mullet, pres. | 241 Plant (161)<br>Wayne Mines (162)<br>Charm Group (164)<br>Rodco (104)<br>Farmerstown (485)<br>Bolivar Mine (363)<br>Dennison (502) | Holmes<br>Holmes, Wayne<br>Holmes<br>Holmes<br>Holmes<br>Stark<br>Tuscarawas | 6,900<br>55,218<br>348,982<br>18,366<br>89,237<br>8,528<br>125,307 | Hs-67<br>Hs-79<br>Hs-86<br>Hs-87<br>Hs-92<br>Sk-235<br>Ts-1997 | IM-768<br>IM-656, D-0429<br>D-0402, D-0508<br>D-0352<br>D-0624<br>IM-945<br>D-0651 |
| Horizon Coal Corp.<br>11415 Erie Ave. SW<br>P.O. Box 618<br>Beach City, OH 44608<br>216-756-2414<br>Merle Mullet, pres. | Whitacre-Greer (468)<br>Canton (251)<br>East Sparta (254)<br>Belden (280)<br>Ladrach (290)<br>Johnson (501) | Carroll<br>Stark<br>Stark<br>Tuscarawas<br>Tuscarawas<br>Tuscarawas | 5,105<br>24,241<br>2,771<br>3,733<br>20,761<br>43,543 | Cl-H[4]<br>Sk-223<br>Sk-230<br>Ts-1941<br>Ts-1962<br>Ts-1995 | D-0791<br>D-0087<br>D-0444<br>D-0224<br>D-0499<br>D-0718 |
| Huberta Coal Co.<br>Box 728<br>Steubenville, OH 43952<br>614-282-5301<br>Teresa C. Schiappa, pres. | Rose Valley-587 (326) | Harrison | 68,918 | Hn-222 | D-0587 |
| J D Mining, Inc.<br>Rte. 4 Box 4113<br>New Philadelphia, OH 44663<br>216-339-4900<br>John R. Demuth, pres. | Demuth Pit (279)<br>Barnhill (505) | Tuscarawas<br>Tuscarawas | 38,237<br>45,622 | Ts-1936<br>Ts-2000 | D-0172<br>D-0744 |
| James Bros. Coal Co.<br>190 S. Main St.<br>P.O. Box 425<br>Magnolia, OH 44643<br>216-866-9388<br>Kermit & Richard James, Jr., partners | James Bros. Coal Co. (59)<br>James Bros. Coal Co. (61) | Carroll<br>Carroll | 49,910<br>46,248 | Cl-17<br>Cl-162 | D-0282<br>D-0408 |
| Jeffco Sales & Mining Co.<br>44301 Y & O Rd.<br>Wellsville, OH 43968<br>216-532-1453<br>Frank T. Salonica, pres. | Y & O Rd. Mine (395) | Columbiana | 6,408 | Ca-949 | D-0625 |
| Johnson Mining Co.<br>39150 Churchill Rd.<br>Lisbon, Oh 44432<br>216-424-3742<br>Robert A. Johnson, owner | Johnson Mining Co. (438)<br>Deep Mine #1 (361) | Carroll<br>Columbiana | 16,273<br>2,043 | Cl-236<br>Ca-922 | D-0683<br>D-0565 |
| Joyce Coal Co., Inc.<br>P.O. Box 264<br>St. Clairsville, OH 43950<br>614-782-1330<br>Andy Massamino, pres. | Crescent (23)<br>Blaine (388)<br>Yudasz (454) | Belmont<br>Belmont<br>Belmont | 3,484<br>35,054<br>56,222 | Bt-980<br>Bt-1156<br>Bt-1166 | D-0258, D-0405<br>D-0663<br>D-0750 |

[3]This mine was operated 1st quarter 1988 by D. & D. Mining Co. and 2nd through 4th quarters by John Glenn Mining.
[4]No mine number has been assigned by the Division of Mines.

## 1988 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|
| K & R Mining, Inc.<br>14695 Lincoln St. SE<br>P.O. Box 365<br>Minerva, OH 44657<br>216-868-7754<br>Dwight A. Ensley, pres. | Foltz (252)<br>Egan (342) | Stark<br>Stark | 11,688<br>199 | Sk-225<br>Sk-234 | D-0105<br>D-0555 |
| K.C.C.I.<br>P.O. Box 24<br>Morristown, OH 43759<br>614-782-1087<br>George Krulock, pres. | Coleman Pit (51) | Belmont | 3,560 | Bt-1130 | D-0465 |
| K D Coal Co., Inc.<br>3379 E. Garfield Rd.<br>New Springfield, OH 44443<br>216-549-3979<br>Kevin E. Thompson, pres. | Benner Mine (369) | Columbiana | 26,869 | Ca-945 | IM-958 |
| Kimble Clay & Limestone Co.<br>Rte. 1 Box 386<br>Dover, OH 44622<br>216-343-1226<br>Floyd E. Kimble, owner | Kimble Clay & Limestone Co. (262)<br>Kimble Clay & Limestone Co. (412)<br>Kimble Clay & Limestone Co. (415)<br>Kimble Clay & Limestone Co. (416)<br>Kimble Clay & Limestone Co. (509) | Tuscarawas<br>Tuscarawas<br>Tuscarawas<br>Tuscarawas<br>Tuscarawas | 71,750<br>55,505<br>16,598<br>24,825<br>21,715 | Ts-1727<br>Ts-1987<br>Ts-K1[5]<br>Ts-K2[5]<br>Ts-K3[5] | IM-9<br>D-0667<br>D-0203<br>D-0413<br>D-0729 |
| King Quarries, Inc.<br>2215 Adamsville Rd.<br>Zanesville, OH 43701<br>614-453-9961<br>David King, pres. | King Strip (217) | Muskingum | 37,772 | Mum-237 | D-0269 |
| Kohl Industries<br>Rte. 1 Box 1083<br>New Philadelphia, OH 44663<br>216-874-4748<br>Jerry K. Kohl, owner | Black Hawk (248) | Stark | 50,560 | Sk-217 | IM-750 |
| L & M Mineral Co.<br>Star Rte.<br>P.O. Box 54<br>Millersburg, OH 44654<br>216-893-2227<br>E. E. Mullet, pres. | Evans (264)<br>Luikert (267)<br>Romig (276)<br>Spring (411) | Tuscarawas<br>Tuscarawas<br>Tuscarawas<br>Tuscarawas | 5,891<br>8,921<br>36,002<br>4,143 | Ts-1884<br>Ts-1914<br>Ts-1930<br>Ts-1982 | IM-6<br>IM-741<br>D-0482<br>D-0701 |
| LaMay Industries, Inc.<br>Box 965<br>Jackson, OH 45640<br>614-286-3988<br>T. L. Darlington , Jr., pres. | Gilmore Pit (175) | Jackson | 220,337 | Jkn-1054 | D-0205 |
| Lisbon Coal Crushers, Inc.<br>37544 Hunters Camp Rd.<br>P.O. Box 492<br>Lisbon, OH 44432<br>216-424-9559<br>William T. Lewis, pres. | Rogers (469)<br>Sell-Mattevi (373) | Columbiana<br>Columbiana | 103,700<br>13,372 | Ca-929<br>Ca-939 | D-0730<br>IM-953 |
| Mac Mining Co.<br>P.O. Box 218<br>Carrollton, OH 44615<br>216-627-3234<br>James L. Myers & William F. Cattrell, partners | CAM #4 (70) | Carroll | 17,454 | Cl-230 | D-0495 |
| Red Malcuit, Inc.<br>707 S. Wooster Ave.<br>P.O. Box 166<br>Strasburg, OH 44680-0166<br>216-878-7114<br>Mark A. Malcuit, pres. | RMI #1 (269)<br>RMI #2 (510) | Tuscarawas<br>Tuscarawas | 70,842<br>21,109 | Ts-1918<br>Ts-M[5] | D-0236<br>D-0737 |
| Marietta Coal Co.<br>67705 Friends Church Rd.<br>St. Clairsville, OH 43950<br>614-695-2197<br>George Nicolozakes, pres. | Borovich-Neitzelt-Suter-Seaway (13)<br>Barack-Henthorne et al. (38)<br>Seabright-Bigley-Taylor (39)<br>Consol (42)<br>Oliver-Clark et al. (58)<br>Lude (53)<br>Baltimore Coal-Presutti (424)<br>North American (450)<br>Denham-Albaugh-Carey (452)<br>Olexo (461) | Belmont<br>Belmont<br>Belmont<br>Belmont<br>Belmont<br>Belmont<br>Belmont<br>Belmont<br>Belmont<br>Belmont | 58,524<br>61,044<br>36,154<br>174,912<br>42,389<br>59,912<br>7,546<br>22,358<br>47,293<br>9,041 | Bt-147<br>Bt-1104<br>Bt-1105<br>Bt-1109<br>Bt-1129<br>Bt-1132<br>Bt-1150<br>Bt-1162<br>Bt-1164<br>Bt-MAR[5] | D-0022<br>D-0088<br>D-0333<br>D-0270<br>D-0491<br>D-0515<br>D-0597<br>D-0720<br>D-0742<br>D-0570 |
| McArthur Lumber & Post Co., Inc.<br>State Rte. 93<br>McArthur, OH 45651<br>614-596-5880<br>Larry D. Murdock, v. pres. | McArthur Lumber & Post Co., Inc. (512) | Vinton | 1,270 | Vn-189 | D-0766 |

[5]No mine number has been assigned by the Division of Mines.

## 1988 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|
| Merco Mining, Inc.<br>P.O. Box 409<br>Moxahala, OH 43761<br>614-342-1809<br>Manford Merckle, pres. | Merco Strip #2 (126) | Gallia | 2,891 | Ga-240 | D-0302 |
| Ted Mesmer & Sons, Inc.<br>10950 Woodworth Rd.<br>North Lima, OH 44452<br>216-549-2385<br>Robert Mesmer, v. pres. | V Pts. Mine (204) | Mahoning | 19,842 | Mg-59 | D-0383 |
| Miller Mining, Inc.<br>Rte. 2 Box 254<br>Sugarcreek, OH 44681<br>216-852-4511<br>Raymond O. Miller, pres. | Garber Pit (479) | Coshocton | 17,277 | Cn-826 | D-0770 |
| | Raber #5 (333) | Holmes | 5,352 | Hs-91 | D-0567 |
| | Trail Pit (426) | Holmes | 21,085 | Hs-94 | D-0699 |
| | Miller Mine (486) | Holmes | 9,086 | Hs-95 | D-0745 |
| | Schindler-Fondriest (499) | Tuscarawas | 4,425 | Ts-197 | D-0802 |
| | Hershberger-Beachy-Troyer (343) | Tuscarawas | 39,105 | Ts-1958 | D-0460 |
| | Houston-Schneiter-Kane (350) | Tuscarawas | 14,623 | Ts-1973 | D-0584 |
| | Stony Point (414) | Tuscarawas | 53,404 | Ts-1990 | D-0654 |
| | Shrock-Hostetler (506) | Tuscarawas | 38,549 | Ts-2002 | D-0779 |
| Milton Mining Co., Inc.<br>P.O. Box 548<br>Jackson, OH 45640<br>614-682-7787<br>Keith Bowman, pres. | Greasy #1 (167) | Jackson | 53,913 | Jkn-548 | D-0368 |
| Mudsock Minerals, Inc.<br>P.O. Box 963<br>New Philadelphia, OH 44663<br>216-343-2200<br>Raymond J. Nowak, pres. | Breyer (410) | Tuscarawas | 799 | Ts-1988 | D-0640 |
| Myers Mining<br>P.O. Box 218<br>Carrollton, OH 44615<br>216-627-7599<br>James L. Myers, owner | Carrollton Mine (464) | Carroll | 12,974 | Cl-240 | D-0755 |
| | Harlem Pit (465) | Carroll | 6,574 | Cl-241 | D-0782 |
| Carl Noble & Son, Inc.<br>P.O. Box 25<br>Harlem Springs, OH 44631<br>216-739-3311<br>Larry Noble, pres. | Noble Strip (427) | Carroll | 8,419 | Cl-237 | D-0710 |
| Nutter Bros. Coal Co., Inc.<br>P.O. Box 190<br>New Lexington, OH 43766<br>614-394-2681<br>James P. Nutter, pres. | Nutter Bros. Coal Co., Inc. (2) | Athens | 2,361 | As-NB[6] | D-0457 |
| Ohio Coal & Construction Corp.<br>P.O. Box 2388<br>Wintersville, OH 43952<br>614-264-7704<br>Richard Delatore, pres. | Ayers Limestone Quarry (18) | Belmont | 9,397 | Bt-905 | D-0544 |
| | Ayers-Reasbeck Stone Quarry (49) | Belmont | 8,626 | Bt-1126 | D-0486 |
| | No. 38 Strip-Bianco (370) | Belmont | 5,396 | Bt-1149 | D-0411 |
| | No. 38 Strip-Goff (387) | Belmont | 54,492 | Bt-1155 | D-0637 |
| | No. 38 Strip-Riddle (459) | Belmont | 10,884 | Bt-1173 | D-0675 |
| | No. 30 Strip-Heik (197) | Jefferson | 9,358 | Jfn-801 | D-0525 |
| | No. 36 Strip-Friendship Park (337) | Jefferson | 194,896 | Jfn-804 | D-0564 |
| | No. 36 Strip-Greentown (401) | Jefferson | 91,783 | Jfn-807 | D-0642 |
| Ohio Edison Co.<br>76 S. Main St.<br>Akron, OH 44308<br>216-384-5298<br>Justin T. Rogers, Jr., pres. | Ohio Edison Co. Strip Mine (193) | Jefferson | 165,125 | Jfn-1267 | D-0167 |
| Ohio River Collieries, Inc.<br>P.O. Box 128<br>Bannock, OH 43972<br>614-968-3504<br>Tony Gentile, pres. | Miller Pit (10) | Belmont | 27,763 | Bt-137 | D-0338 |
| | Black Oak (391) | Belmont | 80,956 | Bt-948 | D-0348 |
| | Negus Strip (25) | Belmont | 21,540 | Bt-992 | D-0305 |
| | 7400 Pit (27) | Belmont | 14,583 | Bt-1074 | D-0340 |
| | Saffell (36) | Belmont | 10,797 | Bt-1102 | D-0340 |
| Ohio Valley Coal Co.<br>56854 Pleasant Ridge Rd.<br>Alledonia, OH 43902<br>216-765-1240<br>Robert E. Murray, pres. | Powhatan #6 (3) | Belmont | 1,220,278 | Bt-68[7] | D-0360 |
| Peabody Coal Co.<br>1951 Barrett Ct.<br>P.O. Box 1990<br>Henderson, KY 42420<br>502-827-0800<br>Howard W. Williams, pres. | Simco Mine (112) | Coshocton | 666,300 | Cn-799 | D-0023 |
| | Sunnyhill #9 South (235) | Perry | 873,050 | Py-265 | D-0324 |
| | Sunnyhill #9 North (236) | Perry | 64,431 | Py-271 | D-0326 |

[6]No mine number has been assigned by the Division of Mines.
[7]This mine was purchased from NACCO Mining Co. in December 1987.

## 1988 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|
| Puskarich Limestone Co.<br>40580 Cadiz-Piedmont Rd.<br>Cadiz, OH 43907<br>614-942-4656<br>Anthony Puskarich, pres. | Harlem Springs Pit (62) | Carroll | 11,524 | Cl-183 | IM-7 |
| Puskarich Mining, Inc.<br>40580 Cadiz-Piedmont Rd.<br>Cadiz, OH 43907<br>614-942-4656<br>Anthony Puskarich, pres. | New Cumberland Pit (268) | Tuscarawas | 24,870 | Ts-1917 | D-0293 |
| Quality Coal Co.<br>Rte. 1<br>Cheshire, OH 45620<br>614-992-6637<br>Jay Hall, Jr., pres. | Buckeye Furnace (379) | Jackson | 206,204 | Jkn-1061 | D-0627 |
| | Church (359) | Vinton | 172,491 | Vn-181 | D-0219 |
| | Rte. 50 Pit (511) | Vinton | 115,354 | Vn-188 | D-0761 |
| | Sentry (301) | Vinton | 4,257 | Vn-655 | D-0004 |
| Quarto Mining Co.<br>Subsidiary of Consolidation Coal Co.<br>1029 Market St.<br>P.O. Box 231<br>Clarington, OH 43915<br>614-458-1381<br>Ben Statler, v. pres. | Powhatan #4 (215) | Monroe | 2,283,919 | Me-4 | D-0422, D-0433 |
| R. & E. Coal Co.<br>8693 Bender St.<br>Navarre, OH 44662<br>216-879-5864<br>Rafael F. Colucy, pres. | R. & E. Coal Co. (275) | Tuscarawas | 2,253 | Ts-1925 | D-0606 |
| R & F Coal Co.<br>538 North Main St.<br>P.O. Box 247<br>Cadiz, OH 43907<br>614-942-2186<br>Jack Cox, pres. | Phillips (24) | Belmont | 28,405 | Bt-984 | D-0263 |
| | Loy-McFarland (30) | Belmont | 18,845 | Bt-1095 | D-0096 |
| | Burson (46) | Belmont | 15,962 | Bt-1117 | D-0263 |
| | Wharton-Cross (56) | Belmont | 50,255 | Bt-1137 | D-0450 |
| | MacMillan-Shephard (308) | Belmont | 267,857 | Bt-1139 | D-0452 |
| | Yoe-Kemp (312) | Belmont | 233,886 | Bt-1148 | D-0553 |
| | Cheslock (385) | Belmont | 13,376 | Bt-1151 | D-0551 |
| | Egypt Valley East (313) | Belmont | 397,808 | Bt-1154 | D-0510 |
| | Yudasz-Mahan (389) | Belmont | 55,669 | Bt-1158 | D-0657 |
| | Michener-Rinkes (390) | Belmont | 260,593 | Bt-1159 | D-0643 |
| | Saksa (451) | Belmont | 41,833 | Bt-1163 | D-0727 |
| | Hendrysburg (453) | Belmont | 107,623 | Bt-1165 | D-0747 |
| | Kinsey (455) | Belmont | 67,706 | Bt-1167 | D-0756 |
| | Meigs-Phillips (456) | Belmont | 55,306 | Bt-1168 | D-0619 |
| | Fodor-Fulton (457) | Belmont | 7,735 | Bt-1169 | D-0684 |
| | Duncan (458) | Belmont | 9,506 | Bt-1170 | D-0789 |
| | Miller (460) | Belmont | 68,703 | Bt-1175 | D-0338 |
| | Watson-Huhn (314) | Belmont, Guernsey | 53,048 | Bt-W[8] | D-0262 |
| | Courtwright (124) | Coshocton | 1,071 | Cn-768 | D-0208 |
| | Bartolec (123) | Coshocton | 168,257 | Cn-779 | D-0320 |
| | Ross-Isleta (120) | Coshocton, Guernsey | 30,166 | Cn-811 | D-0467 |
| | Adams-Hamilton (121) | Coshocton | 38,495 | Cn-812 | D-0466 |
| | Wentz-Green (122) | Coshocton | 62,602 | Cn-814 | D-0489 |
| | Taylor (398) | Coshocton | 91,813 | Cn-820 | D-0623 |
| | Downing 36 (477) | Coshocton | 202,200 | Cn-824 | D-0679 |
| | Hathaway-Isleta (442) | Coshocton | 191,188 | Cn-HI[8] | D-0673 |
| | Hart (130) | Guernsey, Tuscarawas | 57,556 | Gy-300 | D-0177 |
| | Lamborn (147) | Harrison | 102,180 | Hn-218 | D-0436 |
| | Anderson-Phillips (325) | Harrison | 78,372 | Hn-221 | D-0527 |
| | Reppart (327) | Harrison | 176,948 | Hn-223 | D-0552 |
| | Rinkes (156) | Harrison | 31,856 | Hn-224 | D-0416 |
| | Tasa (399) | Harrison | 151,022 | Hn-225 | D-0593 |
| | Duncanwood (443) | Harrison | 271,820 | Hn-227 | D-0681 |
| | Calvin-Mickey (481) | Harrison | 46,759 | Hn-234 | D-0614 |
| | Lamborn South (482) | Harrison | 54,657 | Hn-236 | D-0436 |
| | Mihelios-Pruneski (153) | Harrison | 133,313 | Hn-739 | D-0119 |
| | Matusek-Heil (155) | Harrison, Jefferson | 176,289 | Hn-M[8] | D-0476 |
| | Varkony-Kross-Polen (183) | Jefferson | 304,135 | Jfn-720 | D-0158 |
| | Cochran-Swad (336) | Jefferson | 10,516 | Jfn-802 | D-0500 |
| | Flohr-Green (402) | Jefferson | 71,272 | Jfn-FG[8] | D-0682 |
| | Puskarich (201) | Jefferson | 6,453 | Jfn-P[8] | D-0158 |
| | Flood-Cline (234) | Noble | 80,594 | Ne-FC[8] | D-0453 |
| | Tusco-Mills (348) | Tuscarawas | 23,915 | Ts-1971 | D-0568 |
| | Furbay-Beem (352) | Tuscarawas | 86,638 | Ts-1978 | D-0582 |
| | Ott-Hagloch (375) | Tuscarawas | 93,273 | Ts-1996 | D-0612 |
| | Metcalf Strip (507) | Tuscarawas | 10,565 | Ts-2003 | D-0644 |
| | DeLong-Wilsterman (508) | Tuscarawas | 14,676 | Ts-DW[8] | D-0792 |
| R & R Minerals, Inc.<br>T.R. 319, 7360 Skyview Rd.<br>Millersburg, OH 44654<br>216-674-4926<br>Gary R. Ross, pres. | Orange Pit (444) | Coshocton | 18,521 | Cn-822 | D-0708 |

[8]No mine number has been assigned by the Division of Mines.

## 1988 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|
| R & S Coal Co., Inc.<br>Rte. 1 Box 229<br>Hamden, OH 45634<br>614-384-5282<br>Stephen R. Eberts, owner | R & S Strip (295) | Vinton | 28,820 | Vn-173 | D-0719 |
| R. T. G., Inc.<br>P.O. Box 250<br>Byesville, OH 43723<br>614-685-8383<br>James E. Rossiter, pres. | R. T. G. #5 (323) | Guernsey | 120,133 | Gy-305 | D-0578 |
| Regal Mining, Inc.<br>1270 Trenton Ave. Ext.<br>Uhrichsville, OH 44683<br>614-922-3743<br>Charles L. Smith, pres. | Camp Ecco (360)<br>Buckeye (463) | Carroll<br>Carroll | 52,775<br>12,435 | Cl-233<br>Cl-239 | D-0628<br>D-0749 |
| Royal Oak Industries, Inc.<br>P.O. Box 626<br>Jackson, OH 45640<br>614-286-3988<br>Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners | Global (488) | Jackson | 32,256 | Jkn-566 | IM-871 |
| S. & D. Construction Corp.<br>Rte. 1<br>Toronto, OH 43964<br>614-544-5616<br>M. J. Rankin, pres. | Rankin Mine (196) | Jefferson | 36,136 | Jfn-797 | D-0469 |
| Saginaw Mining Co.<br>1100 Superior Ave.<br>P.O. Box 6508<br>Cleveland, OH 44114-2598<br>216-861-3300<br>R. D. Thompson, pres. | Saginaw Mine (16) | Belmont | 361,524 | Bt-643 | D-0328 |
| Sand Ridge Coal Co.<br>2619 National Rd.<br>Zanesville, OH 43701<br>614-454-9541<br>Charles A. Murrey, owner | Moore Strip (428) | Perry | 1,111 | Py-SR[9] | D-0554 |
| Sands Hill Coal Co., Inc.<br>1203 N. Pennsylvania Ave.<br>Wellston, OH 45692<br>614-384-5659<br>Jack Huffman, pres. | Sands Hill Strip #2 (176)<br>Sands Hill Strip #1 (299)<br>Sands Hill Strip #3 (513) | Jackson<br>Vinton<br>Vinton | 118,157<br>253,686<br>6,402 | Jkn-1055<br>Vn-641<br>Vn-S[9] | D-0347<br>D-0309<br>D-0793 |
| Sands Mining Corp.<br>3445 Adamsville Rd.<br>P.O. Box 2848<br>Zanesville, OH 43701<br>614-454-1483<br>Gene Sands, pres. | Sands #3 (404) | Muskingum | 22,069 | Mum-897 | D-0647 |
| Schiappa Coal Co., Inc.<br>P.O. Box 728<br>Steubenville, OH 43952<br>614-282-5301<br>Teresa C. Schiappa, pres. | Smith 487 (195) | Jefferson | 18,137 | Jfn-795 | D-0487 |
| Shope Mining<br>Rte. 2 Box 165<br>Pedro, OH 45659<br>614-533-2331<br>William Shope, owner | Shope Mining (490) | Lawrence | 402 | Le-448 | IM-987 |
| Southern Ohio Coal Co.<br>P.O. Box 490<br>Athens, OH 45701<br>614-286-5051<br>J. E. Katlic, exec. v. pres. | Meigs Mine #1 (212)<br>Meigs Mine #2 (213)<br>Raccoon Mine #3 (300) | Meigs<br>Meigs<br>Vinton | 911,370<br>3,153,583<br>889,514 | Ms-293<br>Ms-294<br>Vn-652 | D-0354<br>D-0355<br>D-0463 |
| Star Mining Co., Inc.<br>3549 Marietta Rd. SE, Rte. 1<br>Junction City, OH 43748-9743<br>614-342-1440<br>Bruce Schwartz, pres. | Adcock (364) | Perry | 35,427 | Py-335 | D-0615 |
| Stewart Coal Co.<br>Lake Alma Rd.<br>Wellston, OH 45692<br>614-286-4696<br>William F. Stewart, pres. | Stewart Mine (172) | Jackson | 90,575 | Jkn-561 | D-0239 |
| Stewart Construction Co.<br>289 Frank Smith Rd.<br>Wellston, OH 45692<br>614-384-2646<br>Walter Stewart, pres. | Elk (422) | Vinton | 9,921 | Vn-186 | D-0638 |

[9]No mine number has been assigned by the Division of Mines.

## 1988 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|
| Sugarcreek Clay & Limestone, Inc.<br>P.O. Box 402<br>Sugarcreek, OH 44681<br>216-852-4440<br>Daniel O. Miller, pres. | Coshocton Strip (478)<br>Hershberger Strip (487)<br>Troyer Strip (500) | Coshocton<br>Holmes<br>Tuscarawas | 2,276<br>24,210<br>15,829 | Cn-825<br>Hs-S[10]<br>Ts-1986 | D-0758<br>D-0529<br>D-0630 |
| T. P. Mining, Inc.<br>46938 Almar Circle<br>St. Clairsville, OH 43950<br>614-269-9219<br>Thomas Petrozzi, pres. | Monroe Strip (406) | Harrison | 2,093 | Hn-226 | D-0605 |
| Thompson Bros. Mining Co.<br>3379 E. Garfield Rd.<br>New Springfield, OH 44443<br>216-549-3979<br>J. E. Thompson, pres. | Peres Mine (205) | Mahoning | 9,427 | Mg-65 | D-0374 |
| Tri-State Coal Sales, Inc.<br>P.O. Box 754<br>New Lexington, OH 43764<br>614-342-4006<br>Steven L. Allen, pres. | Keiffer (484)<br>McArtor (496) | Hocking<br>Perry | 16,825<br>18,463 | Hg-325<br>Py-318 | D-0767<br>D-0721 |
| Valley Coal Corp.<br>P.O. Box 148<br>Union Furnace, OH 43158<br>304-773-5531<br>Velma G. Zuspan, pres. | Bumgardner Pit (157)<br>Darmac (158) | Hocking<br>Hocking | 7,567<br>42,260 | Hg-284<br>Hg-295 | D-0456<br>D-0304 |
| Valley Mining, Inc.<br>Rte. 1 Box 158B<br>Dennison, OH 44621<br>614-922-3942<br>Kenneth E. Brown, pres. | Goose Run-Perrin Run (187)<br>York (489)<br>S & C Development (354)<br>Fouts-Edwards (417)<br>Page (504) | Jefferson<br>Jefferson<br>Tuscarawas<br>Tuscarawas<br>Tuscarawas | 73,906<br>139,338<br>37,620<br>40,045<br>70,222 | Jfn-785<br>Jfn-813<br>Ts-1980<br>Ts-1983<br>Ts-1999 | D-0090, D-0473<br>D-0740<br>D-0604<br>D-0690<br>D-0738 |
| Varkony Mining Co.<br>R.D. 5<br>Cadiz, OH 43907<br>614-937-2777<br>Stephen Varkony, owner | Varkony Mining Co. (146) | Harrison | 52,266 | Hn-217 | D-0440 |
| Vic Mining, Inc.<br>Rte. 1 Box 355A<br>Dover, OH 44622<br>216-343-1041<br>Victoria J. Lahmers, owner | Newport Pit Strip (377) | Tuscarawas | 6,854 | Ts-1965 | D-0569 |
| W.B. Coal Co.<br>R.D. 1 Box 40<br>Bloomingdale, OH 43910<br>614-282-6503<br>Wayne Boich, pres. | McGinness Bros. Strip (144) | Harrison | 156,421 | Hn-738 | D-0376 |
| Wardell Coal Co.<br>136 W. First St.<br>Strasburg, OH 44680<br>216-878-7262<br>James R. Wardell, pres. | Huggins Mine (462) | Carroll | 3,984 | Cl-228 | D-0566 |
| Waterloo Coal Co., Inc.<br>P.O. Box 177<br>Oak Hill, OH 45656<br>614-286-3988<br>Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners | Bowman Strip (165) | Jackson | 178,987 | Jkn-367 | IM-774, D-0273, D-0286, D-0594 |
| Weirton Construction Co.<br>401 Pennsylvania Ave.<br>Weirton, WV 26062<br>304-748-1400<br>Donald R. Donell, pres. | #19 (180) | Jefferson | 137,403 | Jfn-687 | D-0404 |
| Wilmot Mining Co.<br>P.O. Box 185<br>Wilmot, OH 44689<br>216-359-5411<br>Thomas R. Eddy, pres. | Malavite (498)<br>Troutman (408) | Stark<br>Stark | 8,718<br>23,958 | Sk-214<br>Sk-239 | D-0759<br>IM-973 |
| Zimnox Coal Co.<br>1211 Third St.<br>Brilliant, OH 43913<br>614-598-4111<br>Walter Zimnox, pres. | Zimnox #4 (181) | Jefferson | 61,071 | Jfn-703 | D-0194, D-0736 |
| Zoar Mining Co.<br>P.O. Box 550<br>Zoar, OH 44697<br>216-874-2434<br>Peter C. Johnson, pres. | Zoar Mining Co. (257)<br>Zoar Mining Co. (258) | Tuscarawas<br>Tuscarawas | 854<br>6,661 | Ts-538<br>Ts 540 | IM-27<br>IM-28 |

[10]No mine number has been assigned by the Division of Mines.

## 1988 OHIO PRODUCING COAL COMPANIES

| Company | Number of operations | | Total production (tons) | Company | Number of operations | | Total production (tons) |
|---|---|---|---|---|---|---|---|
| | Surface | Underground | | | Surface | Underground | |
| A.I.R. Construction & Reclamation, Inc. | 1 | | 61,393 | LaMay Industries, Inc. | 1 | | 220,337 |
| Amerikohl Mining, Inc. | 1 | | 29,340 | Lisbon Coal Crushers, Inc. | 2 | | 117,072 |
| Anthony Mining Co., Inc. | 2 | | 152,933 | Mac Mining Co. | 1 | | 17,454 |
| Avis Coal Co. | 1 | | 134,875 | Red Malcuit, Inc. | 2 | | 91,951 |
| B. & D. Coal, Inc. | 2 | | 64,440 | Marietta Coal Co. | 10 | | 519,173 |
| B & N Coal, Inc. | 8 | | 540,357 | McArthur Lumber & Post Co., Inc. | 1 | | 1,270 |
| Bannock Coal Co. | 1 | | 17,472 | Merco Mining, Inc. | 1 | | 2,891 |
| Beaver Creek, Inc. | 1 | | 4,993 | Ted Mesmer & Sons, Inc. | 1 | | 19,842 |
| Belville Mining Co., Inc. | 2 | | 109,629 | Miller Mining, Inc. | 9 | | 202,906 |
| Benedict, Inc. | 4 | | 276,350 | Milton Mining Co., Inc. | | 1 | 53,913 |
| Black Rock, Ltd. | | 1 | 24,521 | Mudsock Minerals, Inc. | 1 | | 799 |
| Blum Coal Co. | 3 | | 37,985 | Myers Mining | 2 | | 19,548 |
| Boich Mining Co. | 1 | | 338,067 | Carl Noble & Son, Inc. | 1 | | 8,419 |
| David Boyle, Inc. | 1 | | 6,179 | Nutter Bros. Coal Co., Inc. | 1 | | 2,361 |
| Buckeye-Industrial Mining Co. | 8 | 1 | 1,137,721 | Ohio Coal & Construction Corp. | 8 | | 384,832 |
| C. K. & K., Inc. | 2 | | 54,411 | Ohio Edison Co. | 1 | | 165,125 |
| Center Mining Co. | 1 | | 4,510 | Ohio River Collieries, Inc. | 5 | | 155,639 |
| Central Ohio Coal Co. | 1 | | 3,400,534 | Ohio Valley Coal Co. | | 1 | 1,220,278 |
| Churchill Enterprises, Inc. | 1 | | 1,316 | Peabody Coal Co. | 1 | 2 | 1,603,781 |
| Coalbrook Mining, Inc. | 1 | | 30,400 | Puskarich Limestone Co. | 1 | | 11,524 |
| Commercial Minerals, Inc. | 3 | | 115,962 | Puskarich Mining, Inc. | 1 | | 24,870 |
| Consolidation Coal Co. | 1 | 1 | 1,327,588 | Quality Coal Co. | 4 | | 498,306 |
| Cravat Coal Co. | 8 | | 238,938 | Quarto Mining Co. | | 1 | 2,283,919 |
| Crawford Coal Co. | 1 | | 2,835 | R. & E. Coal Co. | 1 | | 2,253 |
| Crooksville Coal Co., Inc. | 1 | | 286,549 | R & F Coal Co. | 47 | | 4,522,717 |
| D. & D. Mining Co. | 4 | | 117,111 | R & R Minerals, Inc. | 1 | | 18,521 |
| D & L Contractors, Inc. | 1 | | 106,202 | R & S Coal Co., Inc. | 1 | | 28,820 |
| Daron Coal Co., Inc. | 2 | | 159,209 | R. T. G., Inc. | 1 | | 120,133 |
| Dennis Clay Co. | 1 | | 15,304 | Regal Mining, Inc. | 2 | | 65,210 |
| East Fairfield Coal Co. | 4 | | 216,016 | Royal Oak Industries, Inc. | 1 | | 32,256 |
| East Ohio Limestone Co. | 1 | | 23,877 | S. & D. Construction Corp. | 1 | | 36,136 |
| Eberhart Coal, Inc. | 4 | | 94,235 | Saginaw Mining Co. | | 1 | 361,524 |
| R. A. Eberts Co., Inc. | 1 | | 238,328 | Sand Ridge Coal Co. | 1 | | 1,111 |
| Elk Coal, Inc. | 1 | | 53,735 | Sands Hill Coal Co., Inc. | 3 | | 378,245 |
| Empire Coal Co. | 4 | | 512,013 | Sands Mining Corp. | 1 | | 22,069 |
| ENZ, Inc. | 1 | | 59,392 | Schiappa Coal Co., Inc. | 1 | | 18,137 |
| F. & M. Coal Co. | 1 | | 23,278 | Shope Mining | 1 | | 402 |
| Fairpoint Coal Co. | 2 | | 20,915 | Southern Ohio Coal Co. | | 3 | 4,954,467 |
| G & M Mineral Co. | 2 | | 42,428 | Star Mining Co., Inc. | 1 | | 35,427 |
| GEX Hardy, Inc. | 1 | | 22,799 | Stewart Coal Co. | 1 | | 90,575 |
| John Glenn Mining | 2 | | 19,416 | Stewart Construction Co. | 1 | | 9,921 |
| Green & Son Coal Co. | 1 | | 53,983 | Sugarcreek Clay & Limestone, Inc. | 3 | | 42,315 |
| Hillcrest Coal, Ltd. | 1 | | 11,862 | T.P. Mining, Inc. | 1 | | 2,093 |
| Hocking Valley Mining | 1 | | 16,101 | Thompson Bros. Mining Co. | 1 | | 9,427 |
| Holmes Limestone Co. | 7 | | 652,538 | Tri-State Coal Sales, Inc. | 2 | | 35,288 |
| Horizon Coal Corp. | 6 | | 100,154 | Valley Coal Corp. | 2 | | 49,827 |
| Huberta Coal Co. | 1 | | 68,918 | Valley Mining, Inc. | 5 | | 361,131 |
| J D Mining, Inc. | 2 | | 83,859 | Varkony Mining Co. | 1 | | 52,266 |
| James Bros. Coal Co. | 2 | | 96,158 | Vic Mining, Inc. | 1 | | 6,854 |
| Jeffco Sales & Mining Co. | 1 | | 6,408 | W.B. Coal Co. | 1 | | 156,421 |
| Johnson Mining Co. | 2 | | 18,316 | Wardell Coal Co. | 1 | | 3,984 |
| Joyce Coal Co., Inc. | 3 | | 94,760 | Waterloo Coal Co., Inc. | 1 | | 178,987 |
| K & R Mining, Inc. | 2 | | 11,887 | Weirton Construction Co. | 1 | | 137,403 |
| K.C.C.I. | 1 | | 3,560 | Wilmot Mining Co. | 2 | | 32,676 |
| K D Coal Co., Inc. | 1 | | 26,869 | Zimnox Coal Co. | 1 | | 61,071 |
| | | | | Zoar Mining Co. | 2 | | 7,515 |
| Kimble Clay & Limestone Co. | 5 | | 190,393 | | | | |
| King Quarries, Inc. | 1 | | 37,772 | | | | |
| Kohl Industries | 1 | | 50,560 | TOTAL: 115 companies | 273 | 12 | 31,164,003 |
| L & M Minerals Co. | 4 | | 54,957 | | | | |

## 1988 OHIO DIRECTORY OF REPORTING COAL-PREPARATION PLANTS AND ASSOCIATED FACILITIES, BY COUNTY

| County | Name, address, telephone number, and president/owner/manager of company | Name of plant (and map location number for coal-preparation plants) | Township | State mine number | Division of Reclamation permit number | Type of facility |
|---|---|---|---|---|---|---|
| Belmont | Anco Mining, Inc.<br>42410 National Rd.<br>Belmont, OH 43718<br>614-782-1595<br>Ralph W. Anderson, pres. | Anco Mining Office/Shop | Richland | Bt-1140 | | office, shop |
| | Bannock Coal Co.<br>43249 Harrah St.<br>P.O. Box 98<br>Lafferty, OH 43951<br>614-968-3582<br>Tony Gentile, pres. | Bannock Coal Shops | Wheeling | Bt-1127 | D-0774 | tipple, shops |
| | Consolidation Coal Co.<br>Eastern Region<br>Cadiz, OH 43907<br>614-458-1381<br>Ben Statler, v. pres. | General Services 105 | Wheeling | Hn-5 | | general services |
| | Cravat Coal Co.<br>40580 Cadiz-Piedmont Rd.<br>Cadiz, OH 43907<br>614-942-4656<br>Anthony Puskarich, pres. | Bellaire River Dock<br>Lynn Tipple (26)<br><br>Holloway Tipple #1 | Pultney<br>Washington, York<br><br>Flushing | Bt-876<br>Bt-878<br><br>Bt-963 | D-0687<br>D-0230<br><br>D-0763 | loading dock<br>tipple, prep plant—jig, flotation<br><br>tipple |
| | Marietta Coal Co.<br>67705 Friends Church Rd.<br>St. Clairsville, OH 43950<br>614-695-2197<br>George Nicolozakes, pres. | Marietta Coal Co. (3) | Pultney | Bt-936 | D-0216 | loading dock, prep plant—jig, flotation, centrifugal dryer, crushers, screens |
| | Ohio River Collieries, Inc.<br>P.O. Box 128<br>Bannock, OH 43972<br>614-968-3504<br>Tony Gentile, pres. | Amber Tipple<br>Lafferty Tipple<br>Lafferty Truck Shop | Union<br>Union<br>Union | Bt-844<br>Bt-947<br>Bt-1093 | D-0773<br>D-0773 | tipple<br>tipple<br>shop |
| | Ohio Valley Coal Co.<br>56854 Pleasant Ridge Rd.<br>Alledonia, OH 43902<br>216-765-1240<br>Robert E. Murray, pres. | Powhatan #6 (4) | Washington | Bt-68[1] | D-0360 | prep plant—jigs, cyclones, centrifuges, thickeners, filters, screens |
| | Quarto Mining Co. (subsidiary of Consolidation Coal Co.)<br>1029 Market St.<br>P.O. Box 231<br>Clarington, OH 43915<br>614-458-1381<br>Ben Statler, v. pres. | Central Shop | York | Bt-1000 | | central shop |
| | R & F Coal Co.<br>538 North Main St.<br>P.O. Box 247<br>Cadiz, OH 43907<br>614-942-2186<br>Jack Cox, pres. | Lamira Preparation Plant (1)<br><br>Bellaire River Terminal<br>Rebuild Center | Smith<br><br>City of Bellaire | Bt-108<br><br>Bt-832<br>Bt-1110 | | prep plant—heavy-media washers, cyclone, centrifuges, thickeners, filters, crushers, breakers, screens<br>dock<br>shop |
| | Saginaw Mining Co.<br>1100 Superior Ave.<br>P.O. Box 6508<br>Cleveland, OH 44114-2598<br>216-861-3300<br>R. D. Thompson, pres. | Saginaw Mine (2) | Richland | Bt-643 | D-0328 | prep plant—heavy-media washers, crushers, screens, picking tables, magnets |
| Columbiana | Buckeye-Industrial Mining Co.<br>P.O. Box 389<br>Lisbon, OH 44432<br>216-337-9511<br>John Grisham, pres. | Kensington Preparation Plant (5) | West | Ca-879 | D-0228 | prep plant—heavy-media washer, cyclone, centrifuges, breaker |
| | C & E Coal, Inc.<br>R.D. 2 Box 177<br>Toronto, OH 43964<br>614-537-1498<br>Amos L. Rawson, pres. | C & E Coal, Inc. (6) | Madison | Ca-892 | D-0599 | prep plant—crushers, screens |
| Coshocton | Conesville Coal Preparation Co.<br>Box 222<br>Conesville, OH 43811<br>614-687-3209<br>J. E. Katlic, exec. v. pres. | Conesville Coal Preparation Co. (7) | Franklin | Cn-810 | | prep plant—jig, cyclones, froth cells, flotation, filter press, screens, dryers |

[1]This operation was purchased from NACCO Mining Co. in December 1987.

## 1988 OHIO DIRECTORY OF REPORTING COAL-PREPARATION PLANTS AND ASSOCIATED FACILITIES, BY COUNTY—Continued

| County | Name, address, telephone number, and president/owner/manager of company | Name of plant (and map location number for coal-preparation plants) | Township | State mine number | Division of Reclamation permit number | Type of facility |
|---|---|---|---|---|---|---|
| Coshocton (con't) | Cravat Coal Co.<br>40580 Cadiz-Piedmont Rd.<br>Cadiz, OH 43907<br>614-942-4656<br>Anthony Puskarich, pres. | Coshocton Tipple | Franklin | Cn-736 | D-0671 | tipple |
| | R & F Coal Co.<br>538 North Main St.<br>P.O. Box 247<br>Cadiz, OH 43907<br>614-942-2186<br>Jack Cox, pres. | Barb Tipple | Franklin | Cn-748 | D-0661 | tipple |
| Gallia | Conrich of Ohio, Inc.<br>P.O. Box 59<br>Addison, OH 45610<br>614-446-7040<br>Lee Congleton, pres. | Conrich of Ohio, Inc. | Addison | Ga-216 | D-0739 | loading dock |
| | LaMay Industries, Inc.<br>P.O. Box 965<br>Jackson, OH 45640<br>614-286-3988<br>T. L. Darlington, Jr., pres. | LaMay River Dock | Addison | Ga-229 | D-0725 | dock, tipple |
| | Mack Energy Co.<br>P.O. Box 148<br>Union Furnace, OH 43158-0148<br>614-385-8521<br>Michael McCort, pres. | Mack Energy Co. River Tipple | Clay | Ga-236 | | dock, tipple |
| | Sands Hill Coal Co., Inc.<br>1203 N. Pennsylvania Ave.<br>Wellston, OH 45692<br>614-384-5659<br>Jack Huffman, pres. | Sands Hill Coal Co., Inc. | Addison | Ga-183 | D-0834 | tipple |
| Harrison | Consolidation Coal Co.<br>Eastern Region<br>Cadiz, OH 43907<br>614-458-1381<br>Ben Statler, v. pres. | Georgetown Preparation Plant (8) | Cadiz | Hn-212 | D-0192 | prep plant—jigs, flotation, cyclones, centrifuges, filters, crushers, breaker, screens, dryer, picking tables, magnets |
| | Cravat Coal Co.<br>40580 Cadiz-Piedmont Rd.<br>Cadiz, OH 43907<br>614-942-4656<br>Anthony Puskarich, pres. | 22 Shop<br>250 Shop | Moorefield<br>Short Creek | Hn-230<br>Hn-231 | | shop<br>shop |
| | R & F Coal Co.<br>538 North Main St.<br>P.O. Box 247<br>Cadiz, OH 43907<br>614-942-2186<br>Jack Cox, pres. | Nitrate Plant<br>Machine Shop/Warehouse | Short Creek<br>Cadiz | Hn-680<br>Hn-709 | | nitrate plant<br>shop |
| Hocking | Nutter Bros. Coal Co., Inc.<br>P.O. Box 190<br>New Lexington, OH 43766<br>614-394-2681<br>James P. Nutter, pres. | #1 Tipple | Washington | Hg-293 | | tipple |
| Jackson | Sands Hill Coal Co., Inc.<br>1203 N. Pennsylvania Ave.<br>Wellston, OH 45692<br>614-384-5659<br>Jack Huffman, pres. | Sands Hill Strip #2 (9) | Milton | Jkn-1055 | D-0347 | prep plant—heavy-media cyclone, hydrocyclones, screens, dryer, crusher, picking table, magnets |
| | Waterloo Coal Co., Inc.<br>P.O. Box 177<br>Oak Hill, OH 45656<br>614-286-3988<br>Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners | Bowman Strip (10) | Jefferson, Madison | Jkn-367 | D-0285 | prep plant—jig, crushers, breaker, screens, dryers, wash tables |
| Jefferson | C & E Coal, Inc.<br>R.D. 2 Box 177<br>Toronto, OH 43964<br>614-537-1498<br>Amos L. Rawson, pres. | C & E #2 | Smithfield | Jfn-798[2] | | prep plant—jig, screen, flotation |
| | Ohio Coal & Construction Corp.<br>P.O. Box 2388<br>Wintersville, OH 43952<br>614-264-7704<br>Richard Delatore, pres. | #40 Dock-Shop-Washer (12) | Warren | Jfn-647 | D-0492 | dock, shop, prep plant—heavy-media washer, cyclones, crushers, breaker, screens, dryers |

[2]This operation was abandoned in March 1988 and is not located on the map.

## 1988 OHIO DIRECTORY OF REPORTING COAL-PREPARATION PLANTS AND ASSOCIATED FACILITIES, BY COUNTY—Continued

| County | Name, address, telephone number, and president/owner/manager of company | Name of plant (and map location number for coal-preparation plants) | Township | State mine number | Division of Reclamation permit number | Type of facility |
|---|---|---|---|---|---|---|
| Jefferson (con't) | Route Forty-Three Washer<br>P.O. Box 407<br>Richmond, OH 43944<br>614-282-5301<br>Paul Carapellotti, pres. | Route Forty-Three Washer (11) | Springfield | Jfn-1290 | D-0211 | prep plant—heavy-media washer |
| | W.B. Coal Co.<br>R.D. 1 Box 40<br>Bloomingdale, OH 43910<br>614-282-6503<br>Wayne Boich, owner | W.B. Tipple | Wayne, Cross Creek | Jfn-744 | D-0665 | tipple |
| Lawrence | Collins Mining Co.<br>Rte. 2 Box 48<br>Ironton, OH 45638<br>614-532-9414<br>O. C. Collins, owner | River Dock | Hamilton | Le-415 | D-0777 | dock |
| | Harbour Marine, Inc.<br>P.O. Box 3126<br>Huntington, WV 25702-0126<br>614-886-8444<br>T. L. McKinney, v. pres., engineering | Harbour Marine, Inc. | Union | Le-420 | D-0662 | tipple |
| | Ironton Coal Co., Inc.<br>P.O. Box 2189<br>Ashland, KY 41105-2189<br>606-928-3433<br>Larry Addington, pres. | Ironton Coal Co., Inc. | Upper | Le-439 | | loading dock |
| | Rail-River Terminal Co., Inc.<br>101 Dayton Lane<br>P.O. Box 101<br>Ironton, OH 45638<br>614-532-6100<br>James D. Kulbeth, pres. | Rail-River Terminal | Perry | Le-413 | D-0664 | dock |
| Mahoning | East Fairfield Coal Co.<br>10900 South Ave.<br>P.O. Box 217<br>North Lima, OH 44452-0217<br>216-549-2165<br>R. E. Mackall, pres. | Tipple<br>Washing Plant (13) | Beaver<br>Beaver | Mg-621<br>Mg-623 | D-0214 | tipple<br>prep plant—cyclones, centrifuges, thickener, filter, crushers, screens, magnets |
| | Thompson Bros. Mining Co.<br>3379 E. Garfield Rd.<br>New Springfield, OH 44443<br>216-549-3979<br>J. E. Thompson, owner | Thompson Bros. Mining Co. | Springfield | Mg-588 | D-0711 | tipple |
| Meigs | Raven Hocking Coal Corp.<br>P.O. Box 108<br>Mason, WV 25260<br>304-773-5531<br>Velma Zuspan, pres. | Raven Dock | Sutton | Ms-307 | | dock |
| | Southern Ohio Coal Co.<br>P.O. Box 490<br>Athens, OH 45701<br>614-286-5051<br>J. E. Katlic, exec. v. pres. | Meigs Mine No. 1 (14) | Salem | Ms-293 | D-0354 | prep plant—heavy-media washers, flotation, cyclones, centrifuges, thickeners, filters, breaker, screens |
| Monroe | Quarto Mining Co. (subsidiary of Consolidation Coal Co.)<br>1029 Market St.<br>P.O. Box 231<br>Clarington, OH 43915<br>614-458-1381<br>Ben Statler, v. pres. | Powhatan #4 (15) | Salem | Me-4 | D-0422 | prep plant—jigs, cyclones, centrifuges, thickeners, filters, crushers |
| Morgan | Central Ohio Coal Co.<br>P.O. Box 98<br>Cumberland, OH 43732<br>614-962-2013<br>J. E. Katlic, exec. v. pres. | Muskingum Mine (16) | Meigsville | Ne-41 | D-0420 | prep plant—jigs, flotation, cyclones, thickener, filters, crushers, breakers, screens, magnets |
| Muskingum | King Quarries, Inc.<br>2215 Adamsville Rd.<br>Zanesville, OH 43701<br>614-453-9961<br>David King, pres. | King Quarries Tipple | Washington | Mum-229 | D-0363 | tipple |
| | Sands Mining Corp.<br>3445 Adamsville Rd.<br>P.O. Box 2848<br>Zanesville, OH 43701<br>614-454-1483<br>Gene Sands, pres. | Sands Mining Coal-Preparation Plant (28) | Washington | Mum-239 | D-0428 | prep plant—jig, cyclones, crusher, flotation, conveyors |

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## 1988 OHIO DIRECTORY OF REPORTING COAL-PREPARATION PLANTS AND ASSOCIATED FACILITIES, BY COUNTY—Continued

| County | Name, address, telephone number, and president/owner/manager of company | Name of plant (and map location number for coal-preparation plants) | Township | State mine number | Division of Reclamation permit number | Type of facility |
|---|---|---|---|---|---|---|
| Perry | Crooksville Coal Co., Inc.<br>P.O. Box 149<br>Crooksville, OH 43731<br>614-982-6651<br>Ralph L. Allen, pres. | Crooksville Preparation Plant (18) | Bearfield | Py-317 | D-0248 | prep plant—jig, flotation, centrifugal dryer, crushers, screens |
| | Peabody Coal Co.<br>2644 Pike Twp. Rd. 217 NE<br>New Lexington, OH 43764<br>502-827-0800<br>Howard W. Williams, pres. | Sunnyhill Preparation Plant #0297 (17) | Pike | Py-248 | D-0325 | prep plant—jigs, cyclones, crushers, breaker, screens, centrifuges |
| | Star Mining Co., Inc.<br>3549 Marietta Rd. SE Rte. 1<br>Junction City, OH 43748-9743<br>614-342-1440<br>Bruce Schwartz, pres. | Star Mining Tipple | Salt Lick | Py-339 | D-0692 | tipple |
| Scioto | Ky-Oh Transportation Co.<br>P.O. Box 899<br>South Shore, KY 41175<br>606-932-3101<br>C. N. Gilmore, pres. | Ky-Oh Transportation Co. | Porter | So-96 | | dock |
| | Standard Materials, Inc.<br>P.O. Box 184<br>Wheelersburg, OH 45694<br>216-743-3151<br>C. W. Kelley, asst. sec. | Wheelersburg Dock | Porter | So-92 | D-0607 | dock |
| Tuscarawas | Central Fuel Co.<br>County Rd. 55<br>P.O. Box 165<br>New Philadelphia, OH 44663<br>216-339-5049<br>Keith B. Kimble, gen. mgr. | Central Fuel Co. (20) | York | Ts-1938 | D-0264 | prep plant—jig, screen, dryers |
| | Empire Coal Co.<br>P.O. Box 729<br>Gnadenhutten, OH 44629<br>614-254-4395<br>Bruce Work, pres. | Empire Coal Co. (19) | Clay | Ts-115 | D-0199 | prep plant—jig, flotation, cyclones, filters, crushers, screens |
| | GEX Hardy, Inc.<br>P.O. Box 340<br>Sugarcreek, OH 44681<br>216-852-2431<br>J. J. Blazer, pres. | Barrs Mill Tipple | Sugar Creek | Ts-1601 | | tipple |
| | Horizon Coal Corp.<br>11415 Erie Ave. SW<br>P.O. Box 618<br>Beach City, OH 44608<br>216-756-2414<br>Merle Mullet, pres. | Horizon Coal Wash Plant (21) | Lawrence | Ts-1942 | D-0287 | prep plant—jigs, cyclones, centrifuges, crushers, screens, picking tables |
| Vinton | Benedict, Inc.<br>P.O. Box 315<br>McArthur, OH 45651<br>614-596-5226<br>W. E. Engle, pres. | Benedict, Inc. (22) | Swan | Vn-145 | D-0159 | prep plant—heavy-media washer, cyclone, crusher, conveyors |
| | Jaymar Coal Prep, Inc.<br>Rte. 1<br>Cheshire, OH 45620<br>614-992-6637<br>Jay Hall, Jr., owner | Jaymar Prep Plant (23) | Clinton | Vn-178 | D-0185 | prep plant—washers, cyclones, jig, centrifugal dryer, thickener, Diester table, screens, filter, crusher, magnet |
| | Sands Hill Coal Co., Inc.<br>1203 N. Pennsylvania Ave.<br>Wellston, OH 45692<br>614-384-5659<br>Jack Huffman, pres. | Sands Hill Strip (24) | Clinton | Vn-641 | D-0169 | prep plant—heavy-media washers, flotation, cyclones, centrifuge, crushers, screens, dryer, picking tables, magnets |
| | Southern Ohio Coal Co.<br>P.O. Box 490<br>Athens, OH 45701<br>614-286-5051<br>J. E. Katlic, exec. v. pres. | Raccoon Mine #3 (25) | Wilkesville | Vn-652 | D-0463 | prep plant—heavy-media washer, jig, flotation, cyclones, centrifuges, thickeners, filters, crusher, breaker, screens, magnet |
| Wayne | Holmes Limestone Co.<br>P.O. Box 295<br>Berlin, OH 44610<br>216-893-2721<br>E. E. Mullet, pres. | Holmes Limestone Preparation Plant (27) | Franklin | Hs-79 | D-0283 | prep plant—jig, crushers, dryers, screens, conveyors |

# 1988 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY

NOTE: This directory lists only the coal-producing operations. It does not list tipples, loading docks, preparation plants, or other active, nonproducing operations that would contribute to employment and wage statistics presented on p. 18-20. Information shown is as reported by operators.

SEAM IDENTIFICATION

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | Sharon | 4A | Clarion | 7 | Upper Freeport | 11 | Waynesburg |
| 3 | Lower Mercer | 5 | Lower Kittanning | 7A | Mahoning | 12 | Washington |
| 3A | Upper Mercer | 5A | Strasburg | 8 | Pittsburgh | H | Harlem |
| 3B | Tionesta | 6 | Middle Kittanning | 8A | Pomeroy-Redstone | W | Winters |
| 4 | Brookville | 6A | Lower Freeport | 9 | Meigs Creek | | |

| Name of company | Name of mine | Township | Seam | Thickness (inches) | Type of mine | Method of production | Tonnage produced in 1988 | Days in production in 1988 | Disposition | | Employment | | | State mine number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Method | Tonnage | Production | | Non-production | |
| | | | | | | | | | | | Underground | Surface | | |
| **ATHENS COUNTY — Total production = 137,236 tons** | | | | | | | | | | | | | | |
| Avis Coal Co. | Avis Coal Co. | York | 6<br>6A | 60<br>24 | surface | strip | 134,875 | 311 | truck | 134,875 | | 14 | 1 | As-A[1] |
| Nutter Bros. Coal Co., Inc. | Nutter Bros. Coal Co., Inc. | Trimble | 7 | 40 | surface | strip | 2,361 | 85 | truck | 2,361 | | 1 | | As-NB[1] |
| **BELMONT COUNTY — Total production = 5,155,456 tons** | | | | | | | | | | | | | | |
| Bannock Coal Co. | Shippy | Wheeling | 9 | 40 | surface | strip | 17,472 | 22 | rail<br>truck | 11,445<br>6,027 | | 30 | 6 | Bt-1147 |
| | | | | | | | | | Total | 17,472 | | | | |
| Consolidation Coal Co. | Franklin 125 | Flushing | 8 | 59 | shaft | longwall | 273,872 | 84 | truck | 285,389 | 16 | | 14 | Hn-203[2] |
| | | | | | | cont. miner | 11,517 | | | | | | | |
| | | | | | | Total | 285,389 | | | | | | | |
| | Mahoning Valley | Wheeling | 9 | 42 | surface | strip | 528,956 | 165 | water | 196,652 | | 35 | 11 | Hn-700[2] |
| | | | | | | auger | 7,995 | | truck | 340,299 | | | | |
| | | | | | | Total | 536,951 | | Total | 536,951 | | | | |
| Cravat Coal Co. | Sandy Ridge Pit | Goshen, Warren | 8,11 | | surface | strip | 3,989 | 31 | truck | 3,989 | | 2 | 1 | Bt-1118 |
| | Hendrysburg West | Kirkwood | 8 | | surface | strip | 2,583 | 10 | truck | 2,583 | | 1 | 3 | Bt-1131 |
| | Neffs Pit | Pultney | 9 | | surface | strip | 8,339 | 45 | truck | 8,339 | | 2 | 1 | Bt-1160 |
| | Barnesville Pit | Warren | 8,9 | | surface | strip | 39,450 | 176 | truck | 48,033 | | 19 | 1 | Bt-1143 |
| | | | | | | auger | 8,583 | | | | | | | |
| | | | | | | Total | 48,033 | | | | | | | |
| | Kriechbaum Pit | York | 8,8A,9 | | surface | strip | 37,048 | 164 | truck | 37,048 | | 7 | 2 | Bt-78 |
| Fairpoint Coal Co. | Mel-Worth | Richland | 9 | 40 | surface | strip | 5,199 | 12 | truck | 5,199 | | 4 | 3 | Bt-927 |
| | Shepardstown | Wheeling | 11 | 34 | surface | strip | 11,195 | 6 | truck | 11,195 | | 2 | 2 | Hn-205[2] |
| GEX Hardy, Inc. | Flushing | Flushing, Union | 9 | 32 | surface | strip | 22,799 | 45 | truck | 22,799 | | 1 | | Bt-1099 |
| Joyce Coal Co., Inc. | Crescent | Colerain | 8,9 | | surface | strip | 3,484 | 7 | truck | 3,484 | | [3] | | Bt-980 |
| | Blaine | Colerain | 8 | | surface | strip | 35,054 | 73 | truck | 35,054 | | 4 | | Bt-1156 |
| | Yudasz | Colerain | 8 | | surface | strip | 56,222 | 51 | truck | 56,222 | | 3 | | Bt-1166 |
| K.C.C.I. | Coleman Pit | Wheeling | 9 | 40 | surface | strip | 3,560 | 7 | truck | 3,560 | | 2 | 1 | Bt-1130 |
| Marietta Coal Co. | Seabright-Bigley Taylor | Colerain | 11 | 28 | surface | strip | 29,351 | 43 | truck | 36,154 | | 25[4] | 23 | Bt-1105 |
| | | | | | | auger | 6,803 | | | | | | | |
| | | | | | | Total | 36,154 | | | | | | | |
| | Baltimore Coal-Presutti | Pease, Pultney | 11 | 30 | surface | strip | 7,546 | 17 | truck | 7,546 | | | | Bt-1150 |
| | Barack-Henthorne et al. | Richland | 11 | 36 | surface | strip | 48,947 | 75 | truck | 61,044 | | | | Bt-1104 |
| | | | | | | auger | 12,097 | | | | | | | |
| | | | | | | Total | 61,044 | | | | | | | |

[1]No mine number has been assigned by the Division of Mines.
[2]See also Harrison County.
[3]Averages fewer than one employee per month.
[4]Employment reported for Bt-1105 is a summary of employment for all Marietta Coal Co. operations.

## 1988 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

| Name of company | Name of mine | Township | Seam | Thickness (inches) | Type of mine | Method of production | Tonnage produced in 1988 | Days in production in 1988 | Disposition | | Employment | | | State mine number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Method | Tonnage | Production: Underground | Production: Surface | Non-production | |
| **BELMONT COUNTY (continued)** | | | | | | | | | | | | | | |
| Marietta Coal Co. (con't) | Oliver-Clark et al. | Richland | 11 | 38 | surface | strip | 31,140 | 61 | truck | 42,389 | | | | Bt-1129 |
| | | | | | | auger | 11,249 | | | | | | | |
| | | | | | | Total | 42,389 | | | | | | | |
| | Lude | Richland | 9 | 38 | surface | strip | 33,610 | 91 | truck | 59,912 | | | | Bt-1132 |
| | | | | | | auger | 26,302 | | | | | | | |
| | | | | | | Total | 59,912 | | | | | | | |
| | North American | Richland | 11 | | surface | strip | 20,412 | 32 | truck | 22,358 | | | | Bt-1162 |
| | | | | | | auger | 1,946 | | | | | | | |
| | | | | | | Total | 22,358 | | | | | | | |
| | Olexo | Richland | 11 | | surface | strip | 4,471 | 15 | truck | 9,041 | | | | Bt-MAR[5] |
| | | | | | | auger | 4,570 | | | | | | | |
| | | | | | | Total | 9,041 | | | | | | | |
| | Borovich-Neitzelt-Suter-Seaway | Smith | 11 | 40 | surface | strip | 43,209 | 69 | truck | 58,524 | | | | Bt-147 |
| | | | | | | auger | 15,315 | | | | | | | |
| | | | | | | Total | 58,524 | | | | | | | |
| | Denham-Albaugh-Carey | Smith | 11 | 44 | surface | strip | 39,869 | 44 | truck | 47,293 | | | | Bt-1164 |
| | | | | | | auger | 7,424 | | | | | | | |
| | | | | | | Total | 47,293 | | | | | | | |
| | Consol | Union | 8 | 51 | surface | strip | 123,884 | 179 | truck | 174,912 | | | | Bt-1109 |
| | | | | | | auger | 51,028 | | | | | | | |
| | | | | | | Total | 174,912 | | | | | | | |
| Ohio Coal & Construction Corp. | Ayers Limestone Quarry | Pease | 12 | 40 | surface | strip | 9,397 | 180 | truck | 9,397 | | 2 | 1 | Bt-905 |
| | Ayers-Reasbeck Stone Quarry | Pease | 12 | 40 | surface | strip | 8,626 | 33 | truck | 8,626 | | 1 | | Bt-1126 |
| | No. 38 Strip-Goff | Pease | 12 | 40 | surface | strip | 54,492 | 241 | truck | 54,492 | | 4 | 1 | Bt-1155 |
| | No. 38 Strip-Riddle | Pease | 12 | 40 | surface | strip | 10,884 | 60 | truck | 10,884 | | 2 | 1 | Bt-1173 |
| | No. 31 Strip-Bianco | Richland | 9 | 48 | surface | strip | 5,396 | 87 | truck | 5,396 | | 1 | 1 | Bt-1149 |
| Ohio River Collieries, Inc. | Negus Strip | Colerain | 12 | 48 | surface | strip | 21,540 | 37 | truck | 21,540 | | 2 | 1 | Bt-992 |
| | Miller Pit | Union | 9 | 36 | surface | strip | 25,139 | 68 | truck | 27,763 | | 4 | | Bt-137 |
| | | | | | | auger | 2,624 | | | | | | | |
| | | | | | | Total | 27,763 | | | | | | | |
| | 7400 Pit | Union | 9 | 42 | surface | strip | 12,651 | 58 | truck | 14,583 | | 2 | 2 | Bt-1074 |
| | | | 11 | 28 | | auger | 1,932 | | | | | | | |
| | | | | | | Total | 14,583 | | | | | | | |
| | Saffell | Richland, Union | 11 | 32 | surface | strip | 10,797 | 20 | truck | 10,797 | | 1 | [6] | Bt-1102 |
| | Black Oak | Union, Wheeling | 9 | 30 | surface | strip | 65,432 | 136 | truck | 80,956 | | 8 | 1 | Bt-948 |
| | | | | | | auger | 15,524 | | | | | | | |
| | | | | | | Total | 80,956 | | | | | | | |
| Ohio Valley Coal Co. | Powhatan #6 | Washington | 8 | 62 | slope | cont. miner | 1,220,278 | 168 | rail | 1,091,845 | 203 | | 87 | Bt-68[7] |
| | | | | | | | | | truck | 133,202 | | | | |
| | | | | | | | | | other | 21 | | | | |
| | | | | | | | | | Total | 1,225,068 | | | | |
| R & F Coal Co. | Yudasz-Mahan | Colerain | 11 | 40 | surface | strip | 53,775 | 83 | rail | 1,305 | | 8 | 1 | Bt-1158 |
| | | | | | | auger | 1,894 | | water | 59,825 | | | | |
| | | | | | | Total | 55,669 | | truck | 2 | | | | |
| | | | | | | | | | Total | 61,132 | | | | |
| | Saksa | Colerain | 11 | | surface | strip | 41,833 | 63 | water | 38,511 | | 6 | [6] | Bt-1163 |
| | | | | | | | | | truck | 69 | | | | |
| | | | | | | | | | Total | 38,580 | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kinsey | Colerain | 11 | | surface | strip | 67,706 | 107 | water<br>truck<br>Total | 64,115<br>43<br>64,158 | 9 | 1 | Bt-1167 |
| Wharton Cross | Goshen | 11 | 26 | surface | strip<br>auger<br>Total | 47,859<br>2,396<br>50,255 | 148 | rail<br>water<br>conveyor<br>Total | 569<br>50,030<br>42<br>50,641 | 7 | 1 | Bt-1137 |
| Yoe-Kemp | Goshen | 11<br>12 | 28<br>24 | surface | strip<br>auger<br>Total | 202,345<br>31,541<br>233,886 | 253 | rail<br>water<br>truck<br>Total | 1,263<br>230,714<br>182<br>232,159 | 31 | 2 | Bt-1148 |
| Meigs Phillips | Goshen, Wayne | 9,11 | | surface | strip<br>auger<br>Total | 45,901<br>9,405<br>55,306 | 84 | water<br>truck<br>Total | 54,829<br>64<br>54,893 | 6 | 1 | Bt-1168 |
| Hendrysburg | Kirkwood | 9 | | surface | strip<br>auger<br>Total | 104,579<br>3,044<br>107,623 | 170 | water<br>truck<br>Total | 104,475<br>104<br>104,579 | 14 | 1 | Bt-1165 |
| Phillips | Kirkwood, Warren | 9 | 20 | surface | strip<br>auger<br>Total | 17,873<br>10,532<br>28,405 | 104 | rail<br>water<br>conveyor<br>Total | 426<br>28,947<br>17<br>29,390 | 4 | [6] | Bt-984 |
| Loy-McFarland | Richland | 11 | 36 | surface | strip | 18,845 | 63 | rail<br>water<br>Total | 453<br>20,326<br>20,779 | 3 | [6] | Bt-1095 |
| Cheslock | Richland | 11 | 40 | surface | strip<br>auger<br>Total | 11,519<br>1,857<br>13,376 | 43 | rail<br>water<br>Total | 322<br>14,427<br>14,749 | 2 | [6] | Bt-1151 |
| Michener-Rinkes | Richland | 11 | 30 | surface | strip | 260,593 | 253 | rail<br>water<br>truck<br>Total | 987<br>255,065<br>242<br>256,294 | 34 | 3 | Bt-1159 |
| Fodor-Fulton | Smith | 11 | | surface | strip | 7,735 | 21 | water<br>truck<br>Total | 54,829<br>64<br>54,893 | 1 | [6] | Bt-1169 |
| Duncan | Smith | 11,12 | | surface | strip | 9,506 | 42 | water<br>truck<br>Total | 9,511<br>15<br>9,526 | 1 | [6] | Bt-1170 |
| Miller | Union | 9 | | surface | strip<br>auger<br>Total | 62,060<br>6,643<br>68,703 | 63 | water<br>truck<br>Total | 68,741<br>106<br>68,847 | 9 | 1 | Bt-1175 |
| Burson | Warren | 8 | | surface | strip<br>auger<br>Total | 13,964<br>1,998<br>15,962 | 83 | rail<br>water<br>conveyor<br>Total | 345<br>16,962<br>3<br>17,310 | 2 | [6] | Bt-1117 |
| Egypt Valley East | Warren | 8<br>9<br>11 | <br>42<br>22 | surface | strip<br>auger<br>Total | 396,062<br>1,746<br>397,808 | 232 | rail<br>water<br>truck<br>conveyor<br>Total | 2,520<br>391,203<br>779<br>195<br>394,697 | 53 | 4 | Bt-1154 |
| Watson-Huhn | Warren | 8 | 38 | surface | strip<br>auger<br>Total | 24,239<br>7,423<br>31,662 | 122 | rail<br>water<br>truck<br>Total | 234<br>31,568<br>10<br>31,812 | 4 | [6] | Bt-W[5, 8] |

[5]No mine number has been assigned by the Division of Mines.
[6]Averages fewer than one employee per month.
[7]This mine was purchased from NACCO Mining Co. in December 1987.
[8]See also Guernsey County.

## 1988 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

| Name of company | Name of mine | Township | Seam | Thickness (inches) | Type of mine | Method of production | Tonnage produced in 1988 | Days in production in 1988 | Disposition | | Employment | | | State mine number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Method | Tonnage | Production: Underground | Production: Surface | Non-production | |
| **BELMONT COUNTY (continued)** | | | | | | | | | | | | | | |
| R & F Coal Co. (con't) | MacMillan-Shephard | Wheeling | 11 | 24 | surface | strip | 267,857 | 253 | rail<br>water<br>truck | 1,663<br>263,848<br>191 | | 37 | 3 | Bt-1139 |
| | | | | | | | | | Total | 265,702 | | | | |
| Saginaw Mining Co. | Saginaw Mine | Richland | 8 | 60 | slope | cont. miner | 361,524 | 224 | rail<br>truck | 361,635<br>19 | 95 | | 45 | Bt-643 |
| | | | | | | | | | Total | 361,654 | | | | |
| **CARROLL COUNTY — Total production = 496,860 tons** | | | | | | | | | | | | | | |
| Buckeye-Industrial Mining Co. | Gamber | Brown | 5,6<br>6A,7 | 34 | surface | strip | 38,792 | 278 | truck | 38,792 | | 3 | | Cl-235 |
| | R & T | Fox | 7A | 24 | surface | strip | 21,674 | 51 | truck | 21,674 | | 2 | | Cl-243 |
| | Myers | Rose | 5,6 | 55 | surface | strip | 168,099 | 304 | truck | 168,099 | | 13 | | Cl-238 |
| | Greer | Rose | 6 | 36 | surface | strip | 23,534 | 204 | truck | 24,620 | | 2 | | Cl-242 |
| | | | | | | auger | 1,086 | | | | | | | |
| | | | | | | Total | 24,620 | | | | | | | |
| Horizon Coal Corp. | Whitacre-Greer | Rose | 5 | 42 | surface | strip | 5,105 | 16 | truck | 5,105 | | 1 | | Cl-H[9] |
| | | | 6 | 42 | | | | | | | | | | |
| James Bros. Coal Co. | James Bros. Coal Co. | Rose | 5 | 22 | surface | strip | 44,457 | | truck | 49,910 | | | | Cl-17 |
| | | | 6 | 42 | | auger | 5,453 | | | | | | | |
| | | | 6A | 24 | | Total | 49,910 | | | | | | | |
| | James Bros. Coal Co. | Rose | 5 | 42 | surface | strip | 29,109 | 189 | truck | 46,248 | | 23 | 5 | Cl-162[10] |
| | | | 6 | 22 | | auger | 17,139 | | | | | | | |
| | | | | | | Total | 46,248 | | | | | | | |
| Johnson Mining Co. | Johnson Mining Co. | East | 7,7A | | surface | strip | 16,273 | 60 | truck | 16,273 | | 1 | | Cl-236 |
| Mac Mining Co. | CAM #4 | Lee | H | 20 | surface | strip | 17,454 | 107 | truck | 17,454 | | 2 | | Cl-230 |
| Myers Mining | Carrollton Mine | Center | 7 | 55 | surface | strip | 12,974 | 117 | truck | 12,974 | | 3 | | Cl-240 |
| | Harlem Pit | Lee | H | 24 | surface | strip | 6,001 | 79 | truck | 6,574 | | 3 | | Cl-241 |
| | | | | | | auger | 573 | | | | | | | |
| | | | | | | Total | 6,574 | | | | | | | |
| Carl Noble & Son, Inc. | Noble Strip | Lee | H | 22 | surface | strip | 8,419 | 302 | truck | 8,419 | | 3 | | Cl-237 |
| Puskarich Limestone Co. | Harlem Springs Pit | Lee | H,8 | | surface | strip | 11,524 | | truck | 11,524 | | | [11] | Cl-183 |
| Regal Mining, Inc. | Buckeye | Lee | H | 15 | surface | strip | 12,435 | | truck | 12,435 | | | | Cl-239 |
| | Camp Ecco | Perry | H | 20 | surface | strip | 52,775 | 305 | truck | 52,775 | | 8 | 3 | Cl-233 |
| Wardell Coal Co. | Huggins Mine | Perry | H | 16 | surface | strip | 3,984 | | truck | 3,984 | | 1 | | Cl-228 |
| **COLUMBIANA COUNTY — Total production = 1,182,310 tons** | | | | | | | | | | | | | | |
| Amerikohl Mining, Inc. | Lindsay | Unity | 7 | 36 | surface | strip | 29,340 | 10 | water<br>truck | 4,854<br>24,486 | | 3 | | Ca-976 |
| | | | | | | | | | Total | 29,340 | | | | |
| Beaver Creek, Inc. | Beaver Creek, Inc. | Salem | 6 | 42 | surface | strip | 4,993 | | truck | 4,993 | | | | Ca-855 |
| Blum Coal Co. | Jackson-Strabula Job | Center | 6A,7 | 22 | surface | strip | 9,170 | 185 | truck | 9,170 | | 2 | 2 | Ca-944 |
| | Minick Job | Center, Wayne | 7 | | surface | strip | 11,686 | 148 | truck | 11,686 | | 2 | | Ca-950 |
| | DeAngelo Pit | Franklin | 7 | 24 | surface | strip | 17,129 | 297 | truck | 17,129 | | 2 | | Ca-938 |
| Buckeye-Industrial Mining Co. | Vincent | Salem | 7A | | surface | strip | 6,234 | | truck | 6,234 | | 1 | | Ca-960 |
| | Witherow | Wayne | 6A | 40 | surface | strip | 16,788 | 28 | truck | 16,788 | | 1 | | Ca-965 |
| | Ohio WV/Sheridan Mine | Wayne | 6A | 40 | drift | cont. miner | 581,125 | 291 | truck | 581,125 | 46 | | 11 | Ca-963 |
| Center Mining Co. | C. Ullom | Center | 6A | 14 | surface | strip | 4,510 | 82 | truck | 4,510 | | 2 | | Ca-961 |
| Churchill Enterprises, Inc. | Churchill Enterprises, Inc. | Center, Elkrun | 7 | | surface | strip | 1,316 | 20 | truck | 1,316 | | 1 | | Ca-946 |
| Coalbrook Mining, Inc. | Carle & Oyster | West | 6 | 36 | surface | strip | 30,400 | 295 | truck | 30,400 | | 5 | 1 | Ca-962 |
| Commercial Minerals, Inc. | Morris | Elkrun | 7 | 20 | surface | strip | 17,004 | 37 | truck | 17,004 | | 2 | | Ca-951 |
| | Hahn | Knox | 6 | 24 | surface | strip | 11,503 | 25 | truck | 11,503 | | 2 | | Ca 957 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | West Point | Madison | 6<br>7 | 40<br>24 | surface | strip<br>auger<br>Total | 76,502<br>10,953<br>87,455 | 188 | truck | 87,455 | 9 | 1 | Ca 919 |
| Crawford Coal Co. | Crawford Coal Co. | Elkrun | 6 | 28 | surface | strip | 2,835 | 80 | truck | 2,835 | 3 | | Ca-827 |
| D. & D. Mining Co. | Lyons Pit | Middleton | 7 | 30 | surface | auger | 4,059 | 18 | truck | 4,059 | 2 | 2 | Ca-891 |
| | Saviers Mine | Unity | 4<br>5 | 30<br>10 | surface | strip | 89,220 | 273 | truck | 89,220 | 13 | 5 | Ca-348 |
| | Jack Foster | Unity | 4 | 30 | surface | strip | 4,020 | 20 | truck | 4,020 | [11] | [11] | Ca-872 |
| | Dickson | Unity | 4 | 30 | surface | strip<br>auger<br>Total | 17,889<br>1,923<br>19,812 | 87 | truck | 19,812 | 1 | [11] | Ca-888 |
| East Fairfield Coal Co. | Franklin Square | Salem | 7 | 26 | surface | strip<br>auger<br>Total | 2,351<br>16,478<br>18,829 | 32 | truck | 18,829 | 6 | 2 | Ca-344 |
| | "M" Mine | Salem | 7 | 18 | surface | strip | 30,101 | 60 | truck | 30,101 | 7 | 1 | Ca-968 |
| | "J" Mine | Unity | 7 | 22 | surface | strip<br>auger<br>Total | 9,394<br>3,579<br>12,973 | 38 | truck | 12,973 | 3 | 1 | Ca-953 |
| John Glenn Mining | Lyons Pit | Middleton | 7 | 30 | surface | strip | 277 | 18 | truck | 4,336 | 1 | 1 | Ca-891 |
| | Dawson | Middleton | 7 | 30 | surface | strip | 19,139 | 157 | truck | 19,139 | 3 | | Ca-952 |
| Jeffco Sales & Mining Co. | Y & O Rd. Mine | Madison | 6A,7 | 36 | surface | strip | 6,408 | 15 | truck | 6,408 | 9 | | Ca-949 |
| Johnson Mining Co. | Deep Mine #1 | Madison | 5,6,6A | | surface | strip | 2,043 | 60 | truck | 2,043 | 1 | | Ca-922 |
| K D Coal Co., Inc. | Benner Mine | Middleton | 6 | 34 | surface | strip | 26,869 | 308 | truck | 26,869 | 8 | 1 | Ca-945 |
| Lisbon Coal Crushers, Inc. | Sell-Mattevi | Center | 6 | 36 | surface | strip | 13,372 | 151 | truck | 13,372 | 10 | 1 | Ca-939 |
| | Rogers | Elkrun, Madison | 6<br>7 | 36<br>20 | surface | strip<br>auger<br>Total | 89,086<br>14,614<br>103,700 | 316 | truck | 103,700 | 18 | 2 | Ca-929 |
| **COSHOCTON COUNTY — Total production = 1,508,920 tons** | | | | | | | | | | | | | |
| G & M Mineral Co. | G & M Mineral Co. | Bethlehem | 5 | 36 | surface | strip | 8,975 | 63 | truck | 8,975 | 2 | | Cn-757 |
| | G & M Mineral Co. | Mill Creek | 6 | 26 | surface | strip | 33,453 | 120 | truck | 33,453 | 9 | | Cn-823 |
| Miller Mining, Inc. | Garber Pit | Adams | 6 | | surface | strip | 17,277 | 107 | truck | 17,277 | 1 | [11] | Cn-826 |
| Peabody Coal Co. | Simco Mine | Linton | 5<br>6 | 26<br>38 | surface | strip | 666,300 | 204 | truck<br>conveyor<br>Total | 337,218<br>365,801<br>703,019 | 151 | 43 | Cn-799 |
| R & F Coal Co. | Downing 36 | Adams, Oxford | 6 | 30 | surface | strip | 202,200 | 192 | water<br>truck<br>Total | 2,176<br>203,100<br>205,276 | 20 | 2 | Cn-824 |
| | Adams-Hamilton | Keene | 5 | 30 | surface | strip | 38,495 | 63 | rail<br>water<br>truck<br>Total | 2<br>72<br>40,557<br>40,631 | 4 | 1 | Cn-812 |
| | Taylor | Lafayette | 5<br>6 | 30<br>30 | surface | strip | 91,813 | 237 | water<br>truck<br>Total | 5,914<br>86,182<br>92,096 | 9 | 2 | Cn-820 |
| | Ross-Isleta | Linton, Oxford | 6 | 30 | surface | strip<br>auger<br>Total | 5,804<br>688<br>6,492 | 19 | truck | 6,904 | 1 | [11] | Cn-811[12] |
| | Courtwright | Oxford | 6 | 30 | surface | auger | 1,071 | 21 | truck | 1,131 | [11] | | Cn 768 |
| | Bartolec | Oxford | 5<br>6 | 30<br>30 | surface | strip<br>auger<br>Total | 156,947<br>11,310<br>168,257 | 253 | water<br>truck<br>Total | 50,321<br>119,317<br>169,638 | 17 | 3 | Cn-779 |

[9]No mine number has been assigned by the Division of Mines.
[10]Employment reported for Cl-162 is a summary of employment for all James Bros. Coal Co. operations.
[11]Averages fewer than one employee per month.
[12]See also Guernsey County.

## 1988 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

| Name of company | Name of mine | Township | Seam | Thickness (inches) | Type of mine | Method of production | Tonnage produced in 1988 | Days in production in 1988 | Disposition | | Employment | | | State mine number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Method | Tonnage | Production: Underground | Production: Surface | Non-production | |
| **COSHOCTON COUNTY (continued)** | | | | | | | | | | | | | | |
| R & F Coal Co. (con't) | Wentz-Green | Oxford | 5<br>6 | 27<br>30 | surface | strip | 62,602 | 211 | water<br>truck<br>Total | 17,735<br>45,208<br>62,943 | | 7 | 1 | Cn-814 |
| | Hathaway-Isleta | Oxford | 5<br>6 | 11<br>20 | surface | strip<br>auger<br>Total | 186,785<br>4,403<br>191,188 | 253 | water<br>truck<br>Total | 38,421<br>154,298<br>192,719 | | 20 | 2 | Cn-HI[13] |
| R & R Minerals, Inc. | Orange Pit | Adams | 5<br>6 | 28<br>27 | surface | strip | 18,521 | 269 | truck | 18,521 | | 2 | | Cn-822 |
| Sugarcreek Clay & Limestone, Inc. | Coshocton Strip | Crawford | 6 | | surface | strip | 2,276 | 50 | truck | 2,276 | | 1 | | Cn-825 |
| **GALLIA COUNTY — Total production = 2,891 tons** | | | | | | | | | | | | | | |
| Merco Mining, Inc. | Merco Strip #2 | Huntington | 6 | | surface | strip | 2,891 | | truck | 2,891 | | 1 | 1 | Ga-240 |
| **GUERNSEY COUNTY — Total production = 165,193 tons** | | | | | | | | | | | | | | |
| R & F Coal Co. | Watson-Huhn | Millwood | 8 | 38 | surface | strip<br>auger<br>Total | 16,692<br>4,694<br>21,386 | 46 | rail<br>water<br>Total | 499<br>22,966<br>23,465 | | 3 | [14] | Bt-W[13,15] |
| | Ross-Isleta | Wheeling | 6 | 30 | surface | strip<br>auger<br>Total | 21,922<br>1,752<br>23,674 | 107 | truck | 23,895 | | 3 | [14] | Cn-811[16] |
| R. T. G., Inc. | R. T. G. #5 | Valley | 7 | 48 | surface | strip | 120,133 | 138 | truck | 120,133 | | 10 | 2 | Gy-305 |
| **HARRISON COUNTY — Total production = 2,146,114 tons** | | | | | | | | | | | | | | |
| Consolidation Coal Co. | Franklin 125 | Athens | 8 | 59 | shaft | longwall<br>cont. miner<br>Total | 451,852<br>14,536<br>466,388 | 144 | truck | 466,388 | 26 | | 15 | Hn-203[15] |
| | Mahoning Valley | Athens | 9 | 42 | surface | strip<br>auger<br>Total | 38,118<br>742<br>38,860 | 18 | water<br>truck<br>Total | 7,413<br>31,447<br>38,860 | | 3 | 3 | Hn-700[15] |
| Cravat Coal Co. | Puskarich Farm Pit<br>Shep-Can Pit | Green<br>Monroe | 8<br>7 | | surface<br>surface | strip<br>strip<br>auger<br>Total | 77,357<br>42,481<br>13,593<br>56,074 | 229<br>148 | truck<br>truck | 77,357<br>56,074 | | 15<br>10 | 1<br>1 | Hn-232<br>Hn-233 |
| Fairpoint Coal Co. | Shepardstown | Short Creek | 11 | 34 | surface | strip | 4,521 | 2 | truck | 4,521 | | [14] | [14] | Hn-205[15] |
| Huberta Coal Co. | Rose Valley-587 | Green | 8,8A | 72 | surface | strip | 68,918 | 51 | truck | 68,918 | | 2 | | Hn 222 |
| R & F Coal Co. | Calvin-Mickey | German | 8A | | surface | strip | 46,759 | 127 | water<br>truck<br>Total | 46,067<br>42<br>46,109 | | 6 | 1 | Hn-234 |
| | Lamborn | Green | 8<br>8A | 55<br>15 | surface | strip | 102,180 | 187 | rail<br>water<br>truck<br>conveyor<br>Total | 724<br>73,909<br>21,893<br>4,210<br>100,736 | | | 1 | Hn-218 |
| | Tasa | Green, Short Creek | 8<br>8A<br>9 | 59<br>20<br>18 | surface | strip | 151,022 | 253 | rail<br>water<br>truck<br>conveyor<br>Total | 584<br>106,748<br>28,875<br>9,416<br>145,623 | | 18 | 2 | Hn-225 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lamborn South | Green, Short Creek | 8,8A,9 | | surface | strip | 54,657 | 84 | water | 54,480 | 7 | 1 | Hn-236 |
| | Anderson Phillips | Short Creek | 11 | 40 | surface | strip | 78,372 | 124 | rail | 1,185 | 11 | 1 | Hn-221 |
| | | | | | | | | | water | 80,536 | | | |
| | | | | | | | | | truck | 25 | | | |
| | | | | | | | | | Total | 81,746 | | | |
| | Reppart | Short Creek | 8 | 40 | surface | strip | 176,445 | 253 | rail | 441 | 20 | 2 | Hn-223 |
| | | | 9 | 30 | | auger | 503 | | water | 94,412 | | | |
| | | | | | | Total | 176,948 | | truck | 74,035 | | | |
| | | | | | | | | | Total | 168,888 | | | |
| | Rinkes | Short Creek | 9 | 30 | surface | strip | 26,918 | 232 | rail | 177 | 4 | [14] | Hn-224 |
| | | | | | | auger | 4,938 | | water | 31,222 | | | |
| | | | | | | Total | 31,856 | | truck | 20 | | | |
| | | | | | | | | | Total | 31,419 | | | |
| | Duncanwood | Short Creek | 8 | 56 | surface | strip | 271,590 | 253 | rail | 672 | 31 | 2 | Hn-227 |
| | | | 9 | 30 | | auger | 230 | | water | 95,213 | | | |
| | | | | | | Total | 271,820 | | truck | 153,754 | | | |
| | | | | | | | | | Total | 249,639 | | | |
| | Mihelios-Pruneski | Short Creek | 8 | 56 | surface | strip | 127,139 | 253 | rail | 627 | 17 | 1 | Hn-739 |
| | | | 9 | 30 | | auger | 6,174 | | water | 100,996 | | | |
| | | | | | | Total | 133,313 | | truck | 30,357 | | | |
| | | | | | | | | | Total | 131,980 | | | |
| | Matusek-Heil | Short Creek | 8 | 60 | surface | strip | 173,664 | 253 | rail | 827 | 22 | 2 | Hn-M[11] |
| | | | 8A | 17 | | auger | 2,625 | | water | 138,785 | | | |
| | | | 9 | 30 | | Total | 176,289 | | truck | 33,319 | | | |
| | | | | | | | | | Total | 172,931 | | | |
| T. P. Mining, Inc. | Monroe Strip | Franklin | 7 | 36 | surface | strip | 2,093 | 22 | truck | 2,093 | [14] | | Hn-226 |
| Varkony Mining Co. | Varkony Mining Co. | Green | 8,8A | | surface | strip | 52,266 | 41 | truck | 52,266 | 6 | 1 | Hn-217 |
| W.B. Coal Co. | McGinness Bros. Strip | German | H | 22 | surface | strip | 156,421 | 114 | truck | 156,421 | 16 | 5 | Hn-738 |
| **HOCKING COUNTY — Total production = 88,932 tons** | | | | | | | | | | | | | |
| David Boyle, Inc. | No. 1 Strip | Ward | 6A | 34 | surface | strip | 6,179 | 43 | truck | 6,179 | 1 | [14] | Hg-321 |
| Hocking Valley Mining | Hocking Valley Mining | Ward | 5 | 36 | surface | strip | 16,101 | 133 | truck | 16,101 | 2 | | Hg 324 |
| Tri-State Coal Sales, Inc. | Keiffer | Ward | 6 | 24 | surface | strip | 16,825 | 171 | truck | 16,825 | 4 | | Hg-325 |
| | | | 6A | 36 | | | | | | | | | |
| | | | 7 | 66 | | | | | | | | | |
| Valley Coal Corp. | Bumgardner Pit | Starr | 6A | 24 | surface | strip | 7,567 | | water | 4,263 | 6 | 3 | Hg-284 |
| | | | | | | | | | truck | 3,304 | | | |
| | | | | | | | | | Total | 7,567 | | | |
| | Darmac | Starr | 6,6A | | surface | strip | 42,260 | | water | 42,260 | | | Hg-295 |
| **HOLMES COUNTY — Total production = 561,871 tons** | | | | | | | | | | | | | |
| Holmes Limestone Co. | Farmerstown | Clark | 5,6 | 30 | surface | strip | 89,237 | 229 | truck | 89,237 | 8 | 1 | Hs-92 |
| | Charm Group | Clark, Walnut Creek | 5,6 | 30 | surface | strip | 348,982 | 306 | truck | 348,982 | 17 | 1 | Hs-86 |
| | 241 Plant | Hardy | 4 | 24 | surface | strip | 6,900 | | truck | 6,900 | | | Hs-67 |
| | Wayne Mines | Prairie | 4 | 24 | surface | strip | 38,653 | 217 | truck | 38,653 | 8 | 1 | Hs-79[17] |
| | Rodco | Richland | 3A | 30 | surface | strip | 18,366 | 85 | truck | 18,366 | 1 | 1 | Hs-87 |
| Miller Mining, Inc. | Raber #5 | Walnut Creek | 5 | | surface | strip | 5,352 | 89 | truck | 5,352 | 1 | [14] | Hs-91 |
| | Trail Pit | Walnut Creek | 5 | | surface | strip | 21,085 | 255 | truck | 21,085 | 3 | [14] | Hs 94 |
| | Miller Mine | Walnut Creek | 5 | | surface | strip | 9,086 | 64 | truck | 9,086 | [14] | [14] | Hs-95 |
| Sugarcreek Clay & Limestone, Inc. | Hershberger Strip | Clark | 6 | | surface | strip | 24,210 | 120 | truck | 24,210 | 2 | | Hs-S[13] |
| **JACKSON COUNTY — Total production = 962,102 tons** | | | | | | | | | | | | | |
| B. & D. Coal, Inc. | B. & D. Coal #2 | Milton | 3 | 24 | surface | strip | 7,938 | 46 | truck | 7,938 | 1 | 1 | Jkn-570 |
| | | | 4 | 30 | | | | | | | | | |
| Elk Coal, Inc. | Bowling Strip | Milton | 4,5 | | surface | strip | 52,735 | 307 | truck | 53,735 | 8 | 2 | Jkn-576 |
| LaMay Industries, Inc. | Gilmore Pit | Bloomfield | 4A | 48 | surface | strip | 220,337 | 235 | truck | 220,337 | 16 | | Jkn-1054 |
| | | | 5 | 34 | | | | | | | | | |

[13]No mine number has been assigned by the Division of Mines.
[14]Averages fewer than one employee per month.
[15]See also Belmont County.
[16]See also Coshocton County.
[17]See also Wayne County.

## 1988 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

| Name of company | Name of mine | Township | Seam | Thickness (inches) | Type of mine | Method of production | Tonnage produced in 1988 | Days in production in 1988 | Disposition | | Employment | | | State mine number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Method | Tonnage | Production: Underground | Production: Surface | Non-production | |
| **JACKSON COUNTY (continued)** | | | | | | | | | | | | | | |
| Milton Mining Co., Inc. | Greasy #1 | Milton | 4A | 54 | drift | cont. miner | 53,913 | 84 | truck | 53,913 | 12 | | 2 | Jkn-548 |
| Quality Coal Co. | Buckeye Furnace | Milton | 4 | 24 | surface | strip | 206,204 | 152 | truck | 206,204 | | 15 | | Jkn-1061 |
| | | | 5 | 24 | | | | | | | | | | |
| | | | 6 | 24 | | | | | | | | | | |
| | | | 7 | 24 | | | | | | | | | | |
| Royal Oak Industries, Inc. | Global | Liberty | 1 | 20 | surface | strip | 32,256 | 83 | truck | 32,256 | | 3 | 1 | Jkn-566 |
| Sands Hill Coal Co., Inc. | Sands Hill Strip #2 | Milton | 4A | 29 | surface | strip | 118,157 | 215 | water | 16,183 | | 7 | | Jkn-1055 |
| | | | 5 | 29 | | | | | truck | 101,974 | | | | |
| | | | 6 | 20 | | | | | Total | 118,157 | | | | |
| | | | 6A | | | | | | | | | | | |
| | | | W | 30 | | | | | | | | | | |
| Stewart Coal Co. | Stewart Mine | Jackson | 1 | 24 | surface | strip | 90,575 | 261 | truck | 90,575 | | 12 | | Jkn-561 |
| Waterloo Coal Co., Inc. | Bowman Strip | Bloomfield, Madison | 4A | 48 | surface | strip | 178,987 | 242 | truck | 178,987 | | 18 | 18 | Jkn-367 |
| | | | 5 | 34 | | | | | | | | | | |
| | | | 6 | 12 | | | | | | | | | | |
| **JEFFERSON COUNTY — Total production = 1,940,009 tons** | | | | | | | | | | | | | | |
| Anthony Mining Co., Inc. | Pipo #51 | Knox, Saline | 8 | 40 | surface | strip | 51,623 | 243 | truck | 51,623 | | 11 | 2 | Jfn-788 |
| | Maine 307 | Wayne | 8 | 54 | surface | strip | 98,845 | 229 | truck | 101,310 | | 20 | 3 | Jfn-789 |
| | | | 8A | 16 | | auger | 2,465 | | | | | | | |
| | | | | | | Total | 101,310 | | | | | | | |
| Boich Mining Co. | Boich Mining Co. | Cross Creek | 8 | 56 | surface | strip | 338,067 | 204 | truck | 338,067 | | 35 | 17 | Jfn-528 |
| D & L Contractors, Inc. | D & L Strip | Smithfield | 8 | 56 | surface | strip | 106,202 | 236 | truck | 106,202 | | 18 | 3 | Jfn-780 |
| | | | 8A | 18 | | | | | | | | | | |
| F. & M. Coal Co. | F. & M. Strip | Wayne | 8 | 54 | surface | strip | 23,278 | | truck | 23,278 | | 4 | | Jfn-784 |
| | | | 8A | 16 | | | | | | | | | | |
| Ohio Coal & Construction Corp. | No. 36 Strip-Greentown | Smithfield | 8 | 48 | surface | strip | 91,126 | 251 | truck | 91,783 | | 7 | 2 | Jfn-807 |
| | | | 8A | 24 | | auger | 657 | | | | | | | |
| | | | | | | Total | 91,783 | | | | | | | |
| | No. 30 Strip-Heik | Warren | 11 | 36 | surface | strip | 9,358 | 148 | truck | 9,358 | | 2 | [18] | Jfn-801 |
| | No. 36 Strip-Friendship Park | Wayne | 8 | 50 | surface | strip | 190,428 | 251 | truck | 194,896 | | 25 | 3 | Jfn-804 |
| | | | 8A | 24 | | auger | 4,468 | | | | | | | |
| | | | | | | Total | 194,896 | | | | | | | |
| Ohio Edison Co. | Ohio Edison Co. Strip Mine | Knox | 8 | 40 | surface | strip | 165,125 | 343 | truck | 165,125 | | 20 | 6 | Jfn 1267 |
| R & F Coal Co. | Cochran-Swad | Mount Pleasant | 11 | 30 | surface | strip | 10,516 | | rail | 253 | | | | Jfn-802 |
| | | | | | | | | | water | 11,343 | | | | |
| | | | | | | | | | Total | 11,596 | | | | |
| | Varkony-Kross-Polen | Wayne | 8 | 50 | surface | strip | 304,135 | 253 | rail | 464 | | 36 | 3 | Jfn-720 |
| | | | 8A | 15 | | | | | water | 175,416 | | | | |
| | | | | | | | | | truck | 140,287 | | | | |
| | | | | | | | | | Total | 316,167 | | | | |
| | Flohr-Green | Wayne | 8 | 48 | surface | strip | 71,272 | 146 | rail | 787 | | 10 | 1 | Jfn-FG[19] |
| | | | 8A | 18 | | | | | water | 69,646 | | | | |
| | | | | | | | | | truck | 1,710 | | | | |
| | | | | | | | | | Total | 72,143 | | | | |
| | Puskarich | Wayne | 8A | 20 | surface | strip | 6,453 | 43 | rail | 156 | | 1 | [18] | Jfn-P[19] |
| | | | | | | | | | water | 6,960 | | | | |
| | | | | | | | | | Total | 7,116 | | | | |
| S. & D. Construction Corp. | Rankin Mine | Knox | 8 | 48 | surface | strip | 36,136 | 156 | truck | 36,136 | | 5 | 6 | Jfn-797 |
| Schiappa Coal Co., Inc. | Smith 487 | Smithfield | 8 | 56 | surface | strip | 18,137 | 245 | truck | 18,137 | | 7 | 11 | Jfn-795 |
| | | | 8A | 20 | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Valley Mining, Inc. | York | Green, Smithfield | 8,8A | | surface | strip<br>auger<br>Total | 79,179<br>60,159<br>139,338 | | truck | 139,338 | | 8 | 1 | Jfn-813 |
| | Goose Run-Perrin Run | Smithfield | 8<br>8A | 48<br>20 | surface | strip<br>auger<br>Total | 70,670<br>3,236<br>73,906 | 174 | truck | 73,906 | | 10 | 1 | Jfn-785 |
| Weirton Construction Co. | #19 | Wells | 8 | 54 | surface | strip | 137,403 | 251 | truck | 137,694 | | 32 | 3 | Jfn-687 |
| Zimnox Coal Co. | Zimnox #4 | Wells | 8 | 50 | surface | strip | 61,071 | 107 | truck | 61,071 | | 11 | 8 | Jfn-703 |
| **LAWRENCE COUNTY — Total production = 110,031 tons** | | | | | | | | | | | | | | |
| Belville Mining Co., Inc. | Brady Creek | Washington | 4A | 30 | surface | strip | 28,513 | 64 | water<br>truck<br>Total | 22,986<br>5,527<br>28,513 | | 6 | 1 | Le-432 |
| | Brady Creek | Washington | 4A<br>5 | 30<br>30 | surface | strip | 81,116 | 136 | water<br>truck<br>Total | 74,395<br>6,721<br>81,116 | | 19 | 4 | Le-450 |
| Shope Mining | Shope Mining | Elizabeth | 5 | 30 | surface | strip | 402 | 14 | truck | 402 | | | | Le-448 |
| **MAHONING COUNTY — Total production = 183,382 tons** | | | | | | | | | | | | | | |
| East Fairfield Coal Co. | "HP" Mine | Springfield | 4<br>5 | 28<br>10 | surface | strip<br>auger<br>Total | 148,106<br>6,007<br>154,113 | 189 | truck | 160,254 | | 18 | 2 | Mg-626 |
| Ted Mesmer & Sons, Inc. | V Pts. Mine | Beaver | 5 | | surface | strip | 19,842 | 234 | truck | 19,842 | | 3 | 4 | Mg-59 |
| Thompson Bros. Mining Co. | Peres Mine | Beaver | 4 | 30 | surface | strip<br>auger<br>Total | 2,124<br>7,303<br>9,427 | 156 | truck | 9,427 | | 3 | 3 | Mg-65 |
| **MEIGS COUNTY — Total production = 4,064,953 tons** | | | | | | | | | | | | | | |
| Southern Ohio Coal Co. | Meigs Mine #2 | Columbia | 4A | 57 | shaft | longwall<br>cont. miner<br>Total | 2,444,833<br>708,750<br>3,153,583 | 243 | conveyor | 3,177,807 | 378 | | 135 | Ms-294 |
| | Meigs Mine #1 | Salem | 4A | 57 | shaft | cont. miner | 911,370 | 243 | conveyor | 915,965 | 264 | | 338 | Ms-293 |
| **MONROE COUNTY — Total production = 2,283,919 tons** | | | | | | | | | | | | | | |
| Quarto Mining Co. (subsidiary of Consolidation Coal Co.) | Powhatan #4 | Salem | 8 | 60 | shaft | longwall<br>cont. miner<br>Total | 2,026,392<br>257,527<br>2,283,919 | 255 | water<br>truck<br>Total | 1,748,010<br>535,909<br>2,283,919 | 222 | | 119 | Me-4 |
| **MUSKINGUM COUNTY — Total production = 475,800 tons** | | | | | | | | | | | | | | |
| Black Rock, Ltd. | Black Rock, Ltd. | Washington | 6 | 35 | drift | cont. miner | 24,521 | 130 | truck | 24,521 | 14 | | 2 | Mum-268 |
| Central Ohio Coal Co. | Muskingum Mine | Meigs | 9 | 37 | surface | strip<br>auger<br>Total | 378,039<br>13,399<br>391,438 | 96 | truck<br>conveyor<br>Total | 103,915<br>287,523<br>391,438 | | 60 | 70 | Ne-41[20] |
| King Quarries, Inc. | King Strip | Wayne | 6 | 32 | surface | strip | 37,772 | | truck | 37,772 | | 4 | 1 | Mum-237 |
| Sands Mining Corp. | Sands #3 | Washington | 6 | 48 | surface | strip<br>auger<br>Total | 6,491<br>15,578<br>22,069 | 108 | truck | 22,069 | | 4 | [18] | Mum-897 |
| **NOBLE COUNTY — Total production = 3,470,317 tons** | | | | | | | | | | | | | | |
| B & N Coal, Inc. | Shevlin | Elk | 9 | 30 | surface | strip | 7,088 | 13 | truck | 7,088 | | 1 | | Ne-150 |
| | Shilling | Jefferson | 9 | 30 | surface | strip | 89,508 | 103 | truck | 89,508 | | 5 | 1 | Ne-1008 |
| | Guiler | Marion | 9 | 60 | surface | strip | 259,835 | 208 | truck | 259,835 | | 12 | 1 | Ne-146 |
| | Pipeline | Marion, Stock | 9 | 28 | surface | strip | 11,178 | 31 | truck | 11,178 | | 1 | 1 | Ne-137 |
| | Magazine | Stock | 9 | 36 | surface | strip | 13,018 | 11 | truck | 13,018 | | 1 | | Ne-149 |

[18]Averages fewer than one employee per month.
[19]No mine number has been assigned by the Division of Mines.
[20]See also Noble County.

## 1988 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

| Name of company | Name of mine | Township | Seam | Thickness (inches) | Type of mine | Method of production | Tonnage produced in 1988 | Days in production in 1988 | Disposition | | Employment | | | State mine number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Method | Tonnage | Production | | Non-production | |
| | | | | | | | | | | | Underground | Surface | | |
| **NOBLE COUNTY (continued)** | | | | | | | | | | | | | | |
| Central Ohio Coal Co. | Muskingum Mine | Brookfield, Noble, Sharon | 9 | 39 | surface | strip | 2,911,883 | 212 | conveyor | 3,009,075 | | 276 | 492 | Ne-41[21] |
| | | | | | | auger | 97,213 | | other | 21 | | | | |
| | | | | | | Total | 3,009,096 | | Total | 3,009,096 | | | | |
| R & F Coal Co. | Flood-Cline | Beaver | 9 | 30 | surface | strip | 80,594 | 84 | water | 80,171 | | 10 | 1 | Ne-FC[22] |
| | | | | | | | | | truck | 104 | | | | |
| | | | | | | | | | Total | 80,275 | | | | |
| **PERRY COUNTY — Total production = 1,355,728 tons** | | | | | | | | | | | | | | |
| A.I.R. Construction & Reclamation, Inc. | Drakes | Monroe | 6 | 60 | surface | strip | 61,393 | 123 | truck | 61,393 | | 2 | 1 | Py-340 |
| | | | 7 | 30 | | | | | | | | | | |
| Crooksville Coal Co., Inc. | Crooksville Strip | Bearfield | 5 | 30 | surface | strip | 286,549 | 296 | truck | 395,510 | | 52 | 5 | Py-317 |
| | | | 6 | 42 | | | | | | | | | | |
| | | | 7 | 12 | | | | | | | | | | |
| Dennis Clay Co. | Buzzard Glory Mine | Harrison | 5 | 18 | surface | strip | 15,304 | | truck | 15,304 | | | | Py-331 |
| | | | 6 | | | | | | | | | | | |
| Peabody Coal Co. | Sunnyhill #9 North | Bearfield | 6 | 54 | drift | cont. miner | 64,431 | | rail | 14,312 | 37 | | 8 | Py-271 |
| | | | | | | | | | truck | 46,619 | | | | |
| | | | | | | | | | Total | 60,931 | | | | |
| | Sunnyhill #9 South | Pleasant | 6 | 52 | drift | cont. miner | 873,050 | 238 | rail | 132,071 | 196 | | 41 | Py-265 |
| | | | | | | | | | truck | 747,178 | | | | |
| | | | | | | | | | Total | 879,249 | | | | |
| Sand Ridge Coal Co. | Moore Strip | Madison | 6 | 50 | surface | strip | 1,111 | | truck | 1,111 | | | | Py-SR[22] |
| Star Mining Co., Inc. | Adcock | Jackson | 6 | 39 | surface | strip | 35,427 | 84 | truck | 35,427 | | 6 | [23] | Py-335 |
| Tri-State Coal Sales, Inc. | McArtor | Harrison | 6 | 36 | surface | strip | 18,463 | 120 | truck | 18,463 | | 3 | | Py-318 |
| **STARK COUNTY — Total production = 506,183 tons** | | | | | | | | | | | | | | |
| Buckeye-Industrial Mining Co. | Dobransky | Osnaburg, Sandy | 5,6 | 34 | surface | strip | 72,609 | 253 | truck | 72,609 | | 2 | | Sk-237 |
| | Roberts | Sandy | 5,6 | 34 | surface | strip | 205,622 | 288 | truck | 207,780 | | 13 | | Sk-236 |
| | | | | | | auger | 2,158 | | | | | | | |
| | | | | | | Total | 207,780 | | | | | | | |
| East Ohio Limestone Co. | East Ohio Limestone Co. | Lake | 4 | 40 | surface | strip | 23,877 | 156 | truck | 23,877 | | 6 | 1 | Sk-663 |
| ENZ, Inc. | Sickafoose Pit | Sandy | 4 | 42 | surface | strip | 59,392 | 296 | truck | 59,392 | | 9 | 3 | Sk-208 |
| Hillcrest Coal, Ltd. | Hillcrest Coal, Ltd. | Osnaburg | 5 | 20 | surface | strip | 10,377 | 106 | truck | 11,862 | | 3 | | Sk-221 |
| | | | 6 | 24 | | auger | 1,485 | | | | | | | |
| | | | | | | Total | 11,862 | | | | | | | |
| Holmes Limestone Co. | Bolivar Mine | Bethlehem | 4 | 30 | surface | strip | 8,528 | 43 | truck | 8,528 | | 1 | | Sk-235 |
| Horizon Coal Corp. | Canton | Pike | 4 | 24 | surface | strip | 24,241 | 91 | truck | 24,241 | | 1 | 1 | Sk-223 |
| | | | 5,5A | 30 | | | | | | | | | | |
| | | | 6 | 24 | | | | | | | | | | |
| | East Sparta | Pike | 4 | 24 | surface | strip | 2,771 | 10 | truck | 2,771 | | [23] | | Sk-230 |
| | | | 5,5A | 30 | | | | | | | | | | |
| | | | 6 | 24 | | | | | | | | | | |
| K & R Mining, Inc. | Foltz | Osnaburg | 5 | 30 | surface | strip | 10,030 | 30 | truck | 11,688 | | 6 | 9 | Sk-225 |
| | | | 6 | 30 | | auger | 1,658 | | | | | | | |
| | | | | | | Total | 11,688 | | | | | | | |
| | Egan | Paris | 6 | 28 | surface | strip | 199 | | truck | 199 | | | | Sk-234 |
| Kohl Industries | Black Hawk | Bethlehem, Pike | 4 | 22 | surface | strip | 50,560 | 306 | truck | 50,560 | | 6 | 3 | Sk-217 |
| | | | 5 | 22 | | | | | | | | | | |
| | | | 5A | 18 | | | | | | | | | | |
| Wilmot Mining Co. | Malavite | Pike | 5 | 20 | surface | strip | 8,718 | 67 | truck | 8,402 | | 3 | 1 | Sk-214 |
| | | | 6 | 40 | | | | | | | | | | |
| | Troutman | Pike | 4,5 | 24 | surface | strip | 23,958 | 65 | truck | 23,831 | | 5 | 3 | Sk-239 |

**TUSCARAWAS COUNTY — Total production = 2,082,623 tons**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C. K. & K., Inc. | C. K. & K., Inc. #1 | Sugar Creek | 3A | 28 | surface | strip | 25,304 | 60 | truck | 25,304 | 5 | 1 | Ts-1974 |
| | | | 4 | 14 | | | | | | | | | |
| | C. K. & K., Inc. #2 | York | 6 | 38 | surface | strip | 29,107 | 100 | truck | 29,107 | 4 | 1 | Ts-1993 |
| Cravat Coal Co. | Seven Pit | Rush | 7 | | surface | strip | 5,515 | 35 | truck | 5,515 | 1 | 2 | Ts-1970 |
| Daron Coal Co., Inc. | Harstine | Sugar Creek | 3B | 26 | surface | strip | 905 | 7 | truck | 905 | [23] | 1 | Ts-1924 |
| | Pleasant Valley Mine | Union | 6 | 42 | surface | strip | 101,202 | 276 | truck | 158,304 | 13 | 2 | Ts-1991 |
| | | | 7 | 28 | | auger | 57,102 | | | | | | |
| | | | | | | Total | 158,304 | | | | | | |
| Eberhart Coal, Inc. | Eberhart #2 Hott Strip | Dover | 5,5A | | surface | strip | 25,407 | 269 | truck | 26,109 | 2 | 5 | Ts-1526 |
| | | | | | | auger | 442 | | | | | | |
| | | | | | | Total | 25,849 | | | | | | |
| | Eberhart #2 Hott Strip | Lawrence | 6 | | surface | strip | 7,191 | 202 | truck | 8,983 | 1 | 3 | Ts-1992 |
| | | | | | | auger | 1,955 | | | | | | |
| | | | | | | Total | 9,146 | | | | | | |
| | Eberhart #2 Hott Strip | Lawrence | 5,5A,6 | | surface | strip | 10,298 | 278 | truck | 10,988 | 2 | 3 | Ts-1994 |
| | Eberhart #2 Hott Strip | Lawrence | 5,5A,6 | | surface | strip | 47,546 | 269 | truck | 49,075 | 5 | 6 | Ts-1998 |
| | | | | | | auger | 1,396 | | | | | | |
| | | | | | | Total | 48,942 | | | | | | |
| Empire Coal Co. | Empire Coal Co. | Clay | 5 | 30 | surface | strip | 291,062 | 270 | truck | 429,001 | 45 | 27 | Ts-115 |
| | | | 6 | 30 | | auger | 49,070 | | | | | | |
| | | | 6A | 36 | | Total | 340,132 | | | | | | |
| | | | 7 | 36 | | | | | | | | | |
| | Hopkins-Myers | Clay | 5 | 26 | surface | strip | 10,272 | 71 | truck | 17,367 | 3 | 6 | Ts-1949 |
| | | | 6 | 36 | | auger | 7,095 | | | | | | |
| | | | | | | Total | 17,367 | | | | | | |
| | Dichler-Riggle | Salem | 6 | 30 | surface | strip | 64,415 | 269 | truck | 82,923 | 10 | 1 | Ts-1964 |
| | | | | | | auger | 18,508 | | | | | | |
| | | | | | | Total | 82,923 | | | | | | |
| | Anco Strip | Washington | 6A | 29 | surface | strip | 66,958 | 212 | truck | 71,591 | 11 | 2 | Ts-1963 |
| | | | 7 | 26 | | auger | 4,633 | | | | | | |
| | | | | | | Total | 71,591 | | | | | | |
| Holmes Limestone Co. | Dennison | Mill | 7 | 30 | surface | strip | 125,307 | 279 | truck | 125,307 | 6 | 1 | Ts-1997 |
| Horizon Coal Corp. | Johnson | Dover | 4 | 24 | surface | strip | 43,543 | 98 | truck | 43,543 | 2 | [23] | Ts-1995 |
| | | | 5 | 42 | | | | | | | | | |
| | | | 5A,6 | 18 | | | | | | | | | |
| | Belden | Sandy | 4 | 24 | surface | strip | 3,733 | 26 | truck | 3,733 | [23] | 2 | Ts-1941 |
| | | | 5,5A | 36 | | | | | | | | | |
| | | | 6 | 30 | | | | | | | | | |
| | Ladrach | Sandy | 4 | 24 | surface | strip | 20,761 | 54 | truck | 20,761 | 1 | [23] | Ts-1962 |
| | | | 5,5A | 24 | | | | | | | | | |
| | | | 6 | 30 | | | | | | | | | |
| J D Mining, Inc. | Demuth Pit | Goshen | 5 | 30 | surface | strip | 33,912 | 119 | truck | 38,237 | 3 | 2 | Ts-1936 |
| | | | 6 | 44 | | auger | 4,325 | | | | | | |
| | | | | | | Total | 38,237 | | | | | | |
| | Barnhill | Goshen | 6 | 58 | surface | strip | 45,622 | 171 | truck | 45,622 | 4 | [23] | Ts-2000 |
| | | | 7 | 26 | | | | | | | | | |
| Kimble Clay & Limestone Co. | Kimble Clay & Limestone Co. | Dover | 3A | 20 | surface | strip | 16,598 | 118 | truck | 16,598 | 2 | [23] | Ts-K1[22] |
| | Kimble Clay & Limestone Co. | Dover | 5 | 28 | surface | strip | 24,825 | 111 | truck | 24,825 | 1 | 1 | Ts-K2[22] |
| | | | 6 | 36 | | | | | | | | | |
| | Kimble Clay & Limestone Co. | Dover | 3A | 20 | surface | strip | 21,715 | 135 | truck | 21,715 | 2 | 1 | Ts-K3[22] |
| | Kimble Clay & Limestone Co. | Dover, Sugar Creek | 3A | 28 | surface | strip | 70,110 | 269 | truck | 71,750 | 5 | 4 | Ts-1727 |
| | | | 4 | 18 | | auger | 1,640 | | | | | | |
| | | | 5 | 28 | | Total | 71,750 | | | | | | |
| | | | 6 | 36 | | | | | | | | | |
| | Kimble Clay & Limestone Co. | York | 6 | 46 | surface | strip | 55,505 | 181 | truck | 55,505 | 3 | 1 | Ts-1987 |

[21]See also Muskingum County.
[22]No mine has been assigned by the Division of Mines.
[23]Averages fewer than one employee per month.

## 1988 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

| Name of company | Name of mine | Township | Seam | Thickness (inches) | Type of mine | Method of production | Tonnage produced in 1988 | Days in production in 1988 | Disposition | | Employment | | | State mine number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Method | Tonnage | Production: Underground | Production: Surface | Non-production | |
| **TUSCARAWAS COUNTY (continued)** | | | | | | | | | | | | | | |
| L & M Mineral Co. | Evans | Mill, Rush | 7 | 40 | surface | strip | 5,891 | | truck | 5,891 | | 4 | [24] | Ts-1884 |
| | Luikert | Mill, Warwick | 5,6 | | surface | strip | 8,006 | | truck | 8,921 | | 6 | [24] | Ts-1914 |
| | | | | | | auger | 915 | | | | | | | |
| | | | | | | Total | 8,921 | | | | | | | |
| | Spring | Mill, Warwick | 6 | | surface | strip | 4,143 | | truck | 4,143 | | 2 | | Ts-1982 |
| | Romig | Rush | 6 | 40 | surface | strip | 30,817 | | truck | 36,002 | | 6 | [24] | Ts-1930 |
| | | | | | | auger | 5,185 | | | | | | | |
| | | | | | | Total | 36,002 | | | | | | | |
| Red Malcuit, Inc. | RMI #2 | Franklin | 3A | 23 | surface | strip | 21,109 | 170 | truck | 21,109 | | 6 | | Ts-M[25] |
| | | | 4 | 18 | | | | | | | | | | |
| | RMI #1 | York | 5 | 30 | surface | strip | 62,445 | 237 | truck | 70,842 | | 9 | | Ts-1918 |
| | | | 6 | 36 | | auger | 8,397 | | | | | | | |
| | | | | | | Total | 70,842 | | | | | | | |
| Miller Mining, Inc. | Schindler-Fondriest | Dover | 5,6 | | surface | strip | 4,425 | 42 | truck | 4,425 | | 1 | | Ts-197 |
| | Houston-Schneiter-Kane | Dover | 5,6 | | surface | strip | 14,623 | 149 | truck | 14,623 | | 2 | | Ts-1973 |
| | Stony Point | Sugar Creek | 3A | | surface | strip | 53,404 | 255 | rail | 7,851 | | 5 | [24] | Ts-1990 |
| | | | | | | | | | truck | 33,611 | | | | |
| | | | | | | | | | Total | 41,462 | | | | |
| | Shrock-Hostetler | Sugar Creek | 3A,4 | | surface | strip | 38,549 | 107 | rail | 16,033 | | 1 | [24] | Ts-2002 |
| | | | | | | | | | truck | 22,516 | | | | |
| | | | | | | | | | Total | 38,549 | | | | |
| | Hershberger-Beachy-Troyer | Wayne | 3A,4 | | surface | strip | 39,105 | 255 | truck | 39,756 | | 4 | 1 | Ts-1958 |
| Mudsock Minerals, Inc. | Breyer | Goshen, York | 5 | 32 | surface | strip | 496 | | truck | 799 | | | | Ts-1988 |
| | | | 6 | 36 | | auger | 303 | | | | | | | |
| | | | | | | Total | 799 | | | | | | | |
| Puskarich Mining, Inc. | New Cumberland Pit | Warren | 5,6,6A | | surface | strip | 21,895 | 100 | truck | 24,870 | | 9 | 3 | Ts-1917 |
| | | | | | | auger | 2,975 | | | | | | | |
| | | | | | | Total | 24,870 | | | | | | | |
| R. & E. Coal Co. | R. & E. Coal Co. | Jefferson | 6 | 29 | surface | strip | 2,253 | 19 | truck | 2,253 | | 1 | 1 | Ts-1925 |
| R & F Coal Co. | Ott-Hagloch | Jefferson | 5 | 34 | surface | strip | 72,626 | 190 | truck | 91,701 | | 10 | 1 | Ts-1996 |
| | | | 6 | 30 | | auger | 20,647 | | | | | | | |
| | | | | | | Total | 93,273 | | | | | | | |
| | DeLong-Wilsterman | Mill | 7 | | surface | strip | 14,676 | 42 | water | 14,685 | | 2 | [24] | Ts-DW[25] |
| | | | | | | | | | truck | 22 | | | | |
| | | | | | | | | | Total | 14,707 | | | | |
| | Hart | Oxford | 6 | 25 | surface | strip | 46,475 | 126 | rail | 524 | | 7 | 1 | Gy-300 |
| | | | 7 | 27 | | auger | 11,081 | | water | 33,125 | | | | |
| | | | | | | Total | 57,556 | | truck | 14,441 | | | | |
| | | | | | | | | | conveyor | 10,840 | | | | |
| | | | | | | | | | Total | 58,930 | | | | |
| | Furbay-Beem | Rush | 7 | 30 | surface | strip | 86,638 | 178 | rail | 114 | | 8 | 1 | Ts-1978 |
| | | | | | | | | | water | 83,243 | | | | |
| | | | | | | | | | truck | 82 | | | | |
| | | | | | | | | | Total | 83,439 | | | | |
| | Metcalf Strip | Rush | 7 | | surface | strip | 10,565 | 54 | truck | 10,565 | | 2 | 1 | Ts-2003 |
| | Tusco-Mills | Salem | 5 | 38 | surface | strip | 18,276 | 104 | truck | 24,150 | | 2 | [24] | Ts-1971 |
| | | | 6 | 30 | | auger | 5,639 | | | | | | | |
| | | | | | | Total | 23,915 | | | | | | | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Creek Clay & Limestone, Inc. | Troyer Strip | Auburn | 3A | | surface | strip | 15,829 | 120 | truck | 15,829 | | 1 | | Ts-1986 |
| Valley Mining, Inc. | S & C Development | Mill | 5 | 28 | surface | strip | 37,362 | 116 | truck | 37,620 | | 5 | 1 | Ts-1980 |
| | | | 6 | 42 | | auger | 258 | | | | | | | |
| | | | 7 | 20 | | Total | 37,620 | | | | | | | |
| | Fouts-Edwards | Rush | 7 | 24 | surface | strip | 40,045 | 165 | truck | 40,045 | | 6 | 1 | Ts-1983 |
| | Page | Union | 7 | 36 | surface | strip | 60,133 | 226 | truck | 70,222 | | 10 | 1 | Ts-1999 |
| | | | | | | auger | 10,089 | | | | | | | |
| | | | | | | Total | 70,222 | | | | | | | |
| Vic Mining, Inc. | Newport Pit Strip | Mill | 5,6 | | surface | strip | 6,854 | 84 | truck | 8,797 | | 2 | | Ts-1965 |
| Zoar Mining Co. | Zoar Mining Co. | Sandy | 4 | | surface | strip | 854 | | truck | 854 | | | | Ts-538 |
| | Zoar Mining Co. | Sandy | 4 | | surface | strip | 6,661 | | truck | 6,661 | | | | Ts-540 |
| **VINTON COUNTY — Total production = 2,106,878 tons** | | | | | | | | | | | | | | |
| B. & D. Coal, Inc. | B. & D. Coal #1 | Clinton | 3 | 24 | surface | strip | 56,502 | 176 | truck | 56,502 | | 3 | 11 | Vn-623 |
| | | | 4 | 30 | | | | | | | | | | |
| Benedict, Inc. | Waldron Pit | Clinton | 4,W | | surface | strip | 45,623 | 257 | truck | 45,623 | | 3 | 1 | Vn-183 |
| | Allied West | Elk | W,4A,5 | | surface | strip | 126,753 | 257 | truck | 126,753 | | 4 | 1 | Vn 184 |
| | Austin Pit | Elk | W,4A,5 | | surface | strip | 100,660 | 190 | truck | 100,660 | | 10 | 1 | Vn-187 |
| | Mitchell Hollow | Swan | 4A,5 | | surface | strip | 3,314 | 193 | truck | 3,314 | | 1 | 2 | Vn-172 |
| R. A. Eberts Co., Inc. | McArthur Pit | Elk | 4,5 | | surface | strip | 238,328 | | truck | 238,328 | | 24 | 4 | Vn-163 |
| Green & Son Coal Co. | Green Strip II | Madison | 3 | 15 | surface | strip | 53,983 | 202 | truck | 53,983 | | 6 | 3 | Vn-182 |
| | | | 4 | 48 | | | | | | | | | | |
| | | | 5 | 17 | | | | | | | | | | |
| McArthur Lumber & Post Co., Inc. | McArthur Lumber & Post Co., Inc. | Elk | 3 | 18 | surface | strip | 1,270 | 12 | truck | 1,270 | | 1 | | Vn-189 |
| Quality Coal Co. | Church | Clinton | 4 | 24 | surface | strip | 172,491 | 155 | truck | 172,491 | | 13 | | Vn-181 |
| | | | 5 | 24 | | | | | | | | | | |
| | | | 6 | 24 | | | | | | | | | | |
| | Sentry | Clinton | 6 | 24 | surface | strip | 4,257 | 3 | truck | 4,257 | | [24] | | Vn-655 |
| | Rte. 50 Pit | Elk | 4 | 24 | surface | strip | 115,354 | 122 | truck | 115,354 | | 9 | | Vn-188 |
| | | | 5,6 | | | | | | | | | | | |
| R & S Coal Co., Inc. | R & S Strip | Clinton | 3 | 30 | surface | strip | 28,820 | 128 | truck | 28,820 | | 3 | | Vn-173 |
| Sands Hill Coal Co., Inc. | Sands Hill Strip #1 | Clinton | W | 30 | surface | strip | 253,686 | 257 | water | 32,302 | | 34 | 35 | Vn-641 |
| | | | 4A | 35 | | | | | truck | 221,384 | | | | |
| | | | 5 | 28 | | | | | Total | 253,686 | | | | |
| | | | 6 | 22 | | | | | | | | | | |
| | | | 6A | 18 | | | | | | | | | | |
| | | | 7 | 20 | | | | | | | | | | |
| | Sands Hill Strip #3 | Clinton | W | 40 | surface | strip | 6,402 | | water | 926 | | | | Vn-S[25] |
| | | | 4A | 25 | | | | | truck | 5,476 | | | | |
| | | | | | | | | | Total | 6,402 | | | | |
| Southern Ohio Coal Co. | Raccoon Mine #3 | Wilkesville | 4A | 57 | drift | cont. miner | 889,514 | 243 | rail | 890,712 | 240 | | 161 | Vn-652 |
| Stewart Construction Co. | Elk | Elk | 4 | 48 | surface | strip | 9,921 | 86 | truck | 9,921 | | 1 | [24] | Vn-186 |
| **WASHINGTON COUNTY — Total production = 159,730 tons** | | | | | | | | | | | | | | |
| B & N Coal, Inc. | Shook | Aurelius | 9 | 40 | surface | strip | 42,901 | 71 | truck | 42,901 | | 5 | 1 | Wn-1004 |
| | Lincoln | Aurelius | 9 | 30 | surface | strip | 110,875 | 144 | truck | 110,875 | | 9 | 1 | Wn-1005 |
| | Ullman | Salem | 9 | 30 | surface | strip | 5,954 | 10 | truck | 5,954 | | 1 | | Ne-151 |
| **WAYNE COUNTY — Total production = 16,565 tons** | | | | | | | | | | | | | | |
| Holmes Limestone Co. | Wayne Mines | Franklin | 4 | 24 | surface | strip | 16,565 | 88 | truck | 16,565 | | 4 | 1 | Hs-79[26] |

[24]Averages fewer than one employee per month.
[25]No mine number has been assigned by the Division of Mines.
[26]See also Holmes County.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Agg Rok Materials<br>Div. of Wapak Sand & Gravel Co.<br>711 Frank Rd.<br>Columbus, OH 43223<br>614-443-0466<br>Ralph E. Heffner, pres. | Agg Rok (94) | Franklin | sand & gravel | 407,935 | 399,617 | Fn-36 | IM-302 |
| Aggregate Services, Inc.<br>6025 Dixie Hwy.<br>Suite 200<br>Fairfield, OH 45014<br>513-874-8705<br>James E. Broshear, pres. | Aggregate Services, Inc. (28) | Butler | sand & gravel | 4,821 | 0 | Br-36[1] | IM-649 |
| Alan Stone Co., Inc.<br>P.O. Box 127<br>Chesterhill, OH 43728<br>614-554-6191<br>Ruth E. Janes, pres. | Alan Stone Co., Inc. (43) | Washington | sandstone | [2] | | Wn-45 | IM-125 |
| Allied Corp.<br>1750 Highland Dr.<br>Twinsburg, OH 44087<br>216-425-7861<br>Charles Rauh, pres. | Allied Corp. (435) | Stark | sand & gravel | [3] | | Sk-173 | IM-879 |
| | Northern Ohio Paving Materials (316) | Stark | sand & gravel | [3] | | Sk-A[5] | IM-156 |
| American Aggregates Corp.<br>P.O. Drawer 160<br>Greenville, OH 45331<br>513-548-2111<br>William E. Hole, Jr., pres. | Hamilton #710 (29) | Butler | sand & gravel | 539,686 | 578,060 | Br-5 | IM-153 |
| | Fairfield #711 (30) | Butler | sand & gravel | 1,275,511 | 1,280,056 | Br-35 | IM-200 |
| | Urbana #615 (48) | Champaign | sand & gravel | 285,362 | 263,426 | Cpn-1 | IM-371 |
| | Springfield #623 (16) | Clark | limestone | 169,564 | 141,204 | Ck-1 | IM-373 |
| | Fairborn #413 (52) | Clark | sand & gravel | 341,162 | 322,559 | Ck-13 | IM-366 |
| | Fort Jefferson #424 (19) | Darke | limestone | 292,107 | 355,926 | Dke-1 | IM-362 |
| | Shawnee #225 (20) | Delaware | limestone | 652,325 | 634,242 | Del-4 | IM-262 |
| | Blue Rock Limestone #622 (27) | Fayette | limestone | 143,200 | 89,302 | Fe-2 | IM-169 |
| | Marble Cliff #224 (30) | Franklin | limestone | 1,753,789 | 1,601,155 | Fn-2 | IM-261 |
| | Columbus #210 (95) | Franklin | sand & gravel | 1,494,741 | 1,658,077 | Fn-6 | IM-185 |
| | Lockbourne #213 (96) | Franklin | sand & gravel | 613,720 | 585,906 | Fn-23 | IM-183 |
| | Columbus Limestone #221 (31) | Franklin | limestone | 1,885,522 | 1,894,133 | Fn-53 | IM-185 |
| | Cedarville Limestone #624 (32) | Greene | limestone | 194,213 | 175,126 | Ge-17 | IM-435 |
| | Fairborn Limestone #431 (142) | Greene | limestone | 102,733 | 116,533 | Ge-25 | IM-437 |
| | Haines Rd. #419 (405) | Greene | sand & gravel | 240,047 | 21,417 | Ge-32 | IM-400 |
| | Xenia #414 (110) | Greene | sand & gravel | 458,769 | 473,712 | Ge-33 | IM-379 |
| | Spring Valley Gravel #434 (404) | Greene | sand & gravel | 111,508 | 107,578 | Ge-42[4] | IM-954 |
| | Harrison #712 (118) | Hamilton | sand & gravel | 372,496 | 317,554 | Hmn-37 | IM-170 |
| | Kilby Rd. #713 (119) | Hamilton | sand & gravel | 318,166 | 264,677 | Hmn-AAC[5] | IM-716 |
| | Newark #214 (174) | Licking | sand & gravel | 392,384 | 391,849 | Lg-2 | IM-184 |
| | Eldean Gravel #457 (215) | Miami | sand & gravel | [2] | | Mi-2[6] | IM-367 |
| | Troy Gravel #433 (219) | Miami | sand & gravel | 99,610 | 82,640 | Mi-3[7] | IM-462 |
| | Ernst Gravel #430 (216) | Miami | sand & gravel | 53,142 | 39,180 | Mi-6[8] | IM-356 |
| | Tipp City Gravel #435 (220) | Miami | sand & gravel | 37,900 | 41,712 | Mi-8[9] | IM-355 |
| | Phillipsburg Limestone #421 (70) | Montgomery | limestone | 367,506 | 311,922 | My-1 | IM-374 |
| | Dayton Limestone #420 (71) | Montgomery | limestone | 323,482 | 412,089 | My-23 | IM-368 |
| | Huber Heights Limestone #432 (143) | Montgomery | limestone | 59,081 | 60,803 | My-32 | IM-1012 |
| | Dayton South #412 (223) | Montgomery | sand & gravel | [2] | | My-33 | IM-361 |
| | Rip Rap Road #416 (224) | Montgomery | sand & gravel | 552,913 | 484,361 | My-66 | IM-677 |
| | Circleville #616 (251) | Pickaway | sand & gravel | 247,788 | 214,685 | Pky-1 | IM-409, IM-428, IM-668 |
| | Bellbrook Gravel (350) | Warren | sand & gravel | [2] | | Wan-24[10] | IM-270 |
| | Lytle Limestone #422 (125) | Warren | limestone | 6,102 | 0 | Wan-35 | IM-112 |
| | Franklin #417 (349) | Warren | sand & gravel | 399,042 | 285,442 | Wan-38 | IM-615 |
| American Olean Tile Co.<br>Lewisport, KY 42351<br>502-295-3411<br>Jack Thompson, pres. | Jefferys (24) | Lawrence | clay | 8,372 | 0 | Le-440 | IM-828, IM-902 |
| American Sand & Gravel<br>8188 Wales Rd. NW<br>North Canton, OH 44720<br>216-494-6455<br>Christopher Scala, pres. | American Sand & Gravel (387) | Portage | sand & gravel | [3] | | Pe-ASG[5] | IM-212 |
| | American Sand & Gravel (386) | Stark | sand & gravel | [3] | | Sk-203 | IM-654 |
| Apache Aggregate & Paving Co.<br>46626 County Rte. 495<br>Coshocton, OH 43812<br>614-622-5904<br>Edward E. Ross, pres. | Apache Aggregate & Paving Co. (69) | Coshocton | sand & gravel | [2] | | Cn-718 | IM-227 |
| | Apache Aggregate & Paving Co. (70) | Coshocton | sand & gravel | 105,193 | 144,220 | Cn-783 | IM-717 |

[1]This mine was operated 1st through 3rd quarters 1988 by Aggregate Services, Inc. and 4th quarter by V.I.P. Contractors, Inc.
[2]No sales or production.
[3]No report filed in 1988.
[4]This mine was operated 1st through 3rd quarters 1988 by Ernst Aggregates, Inc. and 4th quarter by American Aggregates Corp.
[5]No mine number has been assigned by the Division of Mines.
[6]This mine was operated 1st through 3rd quarters 1988 by Eldean Gravel Co. and 4th quarter by American Aggregates Corp.
[7]This mine was operated 1st through 3rd quarters 1988 by Troy Gravel Co. and 4th quarter by American Aggregates Corp.
[8]This mine was operated 1st through 3rd quarters 1988 by Ernst Gravel Co. and 4th quarter by American Aggregates Corp.
[9]This mine was operated 1st through 3rd quarters 1988 by Valley Gravel Co. and 4th quarter by American Aggregates Corp.
[10]This mine was operated 1st through 3rd quarters 1988 by Bellbrook Gravel Co. and 4th quarter by American Aggregates Corp.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Armco, Inc.<br>1750 W. Statler Rd.<br>Piqua, OH 45356<br>513-773-4824<br>Albert R. Donovan, mgr. | Piqua Minerals (64) | Miami | limestone | 300,225 | 232,650 | Mi-1 | IM-382 |
| Ashcraft Sand & Gravel<br>5840 Dry Fork Rd.<br>Cleves, OH 45002<br>513-367-2177<br>Otis Ashcraft, pres. | Ashcraft Sand & Gravel (120) | Hamilton | sand & gravel | 49,773 | 49,773 | Hmn-54 | IM-710 |
| Athens Building Materials Co.<br>250 N. Columbus Rd.<br>P.O. Box N<br>Athens, OH 45701<br>614-592-2088<br>Carl J. Murphy, pres. | Kimberly Pit (18) | Athens | sand & gravel | [11] | | As-1117 | IM-369 |
| Atlas Towing Co.<br>P.O. Box 1632<br>Parkersburg, WV 26101<br>304-428-0341<br>Christopher V. Criss, pres. | Belpre Bank Run (432) | Washington | sand & gravel | 8,986 | 8,986 | Wn-54 | IM-383 |
| Aurora Sand & Gravel Co.<br>60 Treat Rd.<br>Aurora, OH 44202<br>216-641-0300<br>Gary Helf, pres. | Aurora Sand & Gravel Co. (260) | Portage | sand & gravel | 196,152 | 222,374 | Pe-84 | IM-868 |
| Ayers Limestone Quarry, Inc.<br>2000 Colerain Pike<br>P.O. Box 67<br>Martins Ferry, OH 43935<br>614-633-2958<br>Thomas E. Ayers, pres. | Ayers Limestone Quarry, Inc. (12) | Belmont | limestone | 86,508 | 86,508 | Bt-716 | IM-1 |
| B & D Paving, Inc.<br>P.O. Box 463<br>Powhatan Point, OH 43942<br>304-233-6505<br>Suzanne Hendershot, pres. | B & D Paving, Inc. (424) | Monroe | sand & gravel | 7,500 | 7,500 | Me-508 | IM-1000 |
| Baker Sand, Inc.<br>9857 Friendsville Rd.<br>Burbank, OH 44214<br>216-948-1448<br>Thom E. Baker, pres. | Baker Sand, Inc. (202)<br>Baker Sand, Inc. (203) | Medina<br>Medina | sand & gravel<br>sand & gravel | 229,929<br>489,589 | 229,929<br>489,589 | Ma-4<br>Ma-20 | IM-426, IM-442<br>IM-448 |
| Barrett Paving Materials, Inc.<br>7374 Main St.<br>Cincinnati, OH 45244<br>513-271-6200<br>Michael Petitjean, pres. | Newtown Sand & Gravel (59)<br>Newtown Sand & Gravel (434) | Clermont<br>Hamilton | sand & gravel<br>sand & gravel | [12]<br>93,249 | <br>93,249 | Ct-9<br>Hmn-56 | IM-526<br>IM-631 |
| Barrett Paving Materials, Inc.<br>9570 State Rte. 128<br>Harrison, OH 45030<br>513-271-6200<br>Chris Ziehlier, w. district mgr. | Miamitown Plant #53 (121) | Hamilton | sand & gravel | 330,000 | 330,000 | Hmn-44 | IM-120 |
| Beaver Creek, Inc.<br>7219 Salem-Unity Rd.<br>Salem, OH 44460<br>216-337-3534<br>Delyte DeYarmon, pres. | Beaver Creek, Inc. (64)<br>(3) | Columbiana | sand & gravel<br>sandstone | 75,173<br>37,488 | 58,846<br>27,977 | Ca-855 | IM-891 |
| Beck Sand & Gravel, Inc.<br>2820 Webb Rd.<br>Ravenna, OH 44266<br>216-626-3863<br>Robert E. Wenrich, pres. | Beck Sand & Gravel, Inc. (256) | Portage | sand & gravel | 301,180 | 301,180 | Pe-50 | IM-96 |
| Becky Lane Trucking, Inc.<br>441 Iowa St.<br>Ashland, KY 41101<br>606-325-8301<br>Janet Griffiths, pres. | Becky Lane Sand (167) | Lawrence | sand & gravel | 9,038 | 9,038 | Le-430 | IM-844 |
| Paul D. Beery Trucking Co.<br>4770 Cincinnati-Zanesville Rd. NE<br>Lancaster, OH 43130<br>614-653-5061<br>Paul D. Beery, pres. | Paul D. Beery Trucking Co. (401) | Fairfield | sand & gravel | 1,350 | 3,720 | Fd-14 | IM-933 |

[11]No sales or production.
[12]No report filed in 1988.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Belden Brick Co.<br>P.O. Box 910<br>Canton, OH 44701<br>216-852-2424<br>William H. Belden, Jr., pres. | Moomaw Pit (56) | Tuscarawas | clay | 89,112 | 89,112 | Ts-1517 | IM-46 |
| | (56) | | shale | 96,158 | 96,158 | | |
| | Finzer-Belden (57) | Tuscarawas | clay | 30,358 | 30,358 | Ts-1646 | IM-44 |
| | (57) | | shale | 135,049 | 135,049 | | |
| | Belden-Wallick (58) | Tuscarawas | clay | 120,453 | 120,453 | Ts-1841 | IM-45 |
| | (58) | | shale | 19,599 | 19,599 | | |
| | Shanesville Pit (59) | Tuscarawas | clay | 26,583 | 26,583 | Ts-1939 | IM-47 |
| | (59) | | shale | 65,443 | 65,443 | | |
| | Beagle Pit (60) | Tuscarawas | clay | 14,441 | 14,441 | Ts-1960 | IM-48 |
| Bellbrook Gravel Co.<br>135 E. Main St.<br>P.O. Box 440<br>Tipp City, OH 45371<br>513-667-4431<br>James Ernst, pres. | Bellbrook Gravel Co. (350) | Warren | sand & gravel | [13] | | Wan-24[14] | IM-270 |
| Belu & Son Paving, Inc.<br>4900 French Creek Rd.<br>Lorain, OH 44054<br>216-277-7087<br>John W. Belu, pres. | Belu Sand Pit (191) | Lorain | sand & gravel | 1,776 | 1,263 | Ln-12 | IM-731 |
| Belville Mining Co., Inc.<br>P.O. Box 834<br>Ironton, OH 45638<br>614-643-2331<br>Thomas J. Belville, pres. | Brady Creek (25) | Lawrence | clay | 15,102 | 15,102 | Le-403 | IM-738, D-0536 |
| | (25) | | shale | [13] | | | |
| | (140) | | limestone | 21,783 | 21,783 | | |
| | Brady Creek (80) | Lawrence | clay | 24,975 | 24,975 | Le-449 | D-0746 |
| Benco Leasing, Inc.<br>State Rte. 416 Rte. 3<br>New Philadelphia, OH 44663-9507<br>216-339-3339<br>Ben Cookson, pres. | Goshen 416 Site (389) | Tuscarawas | sand & gravel | 24,347 | 20,396 | Ts-1976 | IM-941, IM-942 |
| Best Sand Corp.<br>11830 Ravenna Rd.<br>P.O. Box 87<br>Chardon, OH 44024<br>216-946-3441<br>William E. Conway, pres. | Best Sand Corp. (17) | Geauga | sandstone | 580,993 | 686,683 | Gea-3 | IM-89 |
| Best Silica Co.<br>11830 Ravenna Rd.<br>P.O. Box 87<br>Chardon, OH 44024<br>216-946-3441<br>Alexander McAfee, pres. | Best Silica Co. (16) | Geauga | sandstone | 42,724 | 0 | Gea-36 | IM-337 |
| Beverly Slag Co.<br>P.O. Box 599<br>McConnelsville, OH 43756<br>614-962-5621<br>Fred R. Price, pres. | Devola Pit (364) | Washington | sand & gravel | [13] | | Wn-55 | IM-669 |
| Big Walnut Sand & Gravel Co.<br>88 W. Mound St.<br>Columbus, OH 43215-5018<br>614-224-2678<br>Steven D. Rowe, partner | Big Walnut Sand & Gravel Co. (97) | Franklin | sand & gravel | [13] | | Fn-14 | IM-832 |
| Black Top Contracting, Inc.<br>P.O. Box 98<br>Belpre, OH 45714<br>614-423-5455<br>Terry R. Wyatt, pres. | Black Top #1 (19) | Athens | sand & gravel | 22,488 | 22,488 | As-588 | IM-630 |
| Bluffton Stone Co.<br>P.O. Box 26<br>Bluffton, OH 45817-0026<br>419-358-6941<br>Maurice Fett, pres. | Bluffton Stone Co. (3) | Allen | limestone | 136,640 | 126,814 | An-1 | IM-485 |
| Bolin & Bartley, Inc.<br>1217 County Rd. 1475 Rte. 1<br>Ashland, OH 44805<br>419-289-1507<br>Clarence W. Bolin, treas. | Bolin & Bartley Sand & Gravel (409) | Richland | sand & gravel | 45,809 | 59,853 | Rd-20 | IM-617 |
| Elmer Borchardt, Inc.<br>313 E. Lucas St.<br>P.O. Box 188<br>Castalia, OH 44824-0188<br>419-684-5361<br>Dean Borchardt, pres. | Elmer Borchardt, Inc. (83) | Erie | sand & gravel | 1,250 | 1,250 | Ee-18 | IM-676 |

[13]No sales or production.
[14]This mine was operated 1st through 3rd quarters 1988 by Bellbrook Gravel Co. and 4th quarter by American Aggregates Corp.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Bowerston Shale Co.<br>1329 Seven Hills Rd. NE<br>Newark, OH 43055<br>614-763-3921<br>William U. Milliken, pres. | Hanover (31)<br>Frazeysburg (38) | Licking<br>Muskingum | shale<br>clay | 17,274<br>3,688 | 17,274<br>3,688 | Lg-501<br>Mum-776 | IM-257<br>IM-256 |
| Bowerston Shale Co.<br>515 Main St.<br>Bowerston, OH 44695<br>614-269-2921<br>William U. Milliken, pres. | Bowerston (11) | Harrison | shale | 38,250 | 38,250 | Hn-152 | IM-42 |
| D. H. Bowman & Sons, Inc.<br>1201 State Rte. 97<br>P.O. Box 57<br>Bellville, OH 44813-1227<br>419-886-2711<br>Richard D. Bowman, pres. | D. H. Bowman & Sons, Inc. (287) | Richland | sand & gravel | 81,552 | 49,732 | Rd-4 | IM-279 |
| Boyas Excavating, Inc.<br>4100 Brookpark Rd.<br>Cleveland, OH 44134-1196<br>216-398-3900<br>Pete Boyas, pres. | Boyas' Valley View Quarry (13) | Cuyahoga | sandstone | [15] | | Cya-BE[16] | IM-686 |
| Boyd Gravel Co.<br>24270 Twp. Rd. 1202<br>Coshocton, OH 43812<br>614-622-4406<br>Don E. Mill, pres. | Boyd Gravel Co. (71) | Coshocton | sand & gravel | 105,529 | 83,703 | Cn-694 | IM-293 |
| Braun Enterprises<br>P.O. Box 2275<br>Wintersville, OH 43952<br>614-264-5759<br>David Patterson, owner | Riesback Pit[17] | Belmont | limestone | [15] | | Bt-1161 | |
| Briar Hill Stone Co.<br>P.O. Box 398<br>Glenmont, OH 44628<br>216-276-4011<br>Barry T. Blum, pres. | Quarry #26 (4)<br>Quarry #3 (5)<br>Quarry #32 (6)<br>Quarry #24 (7)<br>Quarry #18 (8)<br>Quarry #54 (46)<br>Quarry #55 (44)<br>Quarry #31 (19)<br>Quarry #34 (22)<br>Quarry #6 (23) | Coshocton<br>Coshocton<br>Coshocton<br>Coshocton<br>Coshocton<br>Coshocton<br>Coshocton<br>Holmes<br>Knox<br>Knox | sandstone<br>sandstone<br>sandstone<br>sandstone<br>sandstone<br>sandstone<br>sandstone<br>sandstone<br>sandstone<br>sandstone | 3,457<br>5,755<br>2,224<br>1,725<br>1,381<br>761<br>6,205<br>225<br>190<br>1,244 | 3,219<br>5,034<br>468<br>1,663<br>1,034<br>42<br>5,885<br>0<br>0<br>686 | Cn-13<br>Cn-659<br>Cn-686<br>Cn-692<br>Cn-695<br>Cn-809<br>Cn-815<br>Hs-49<br>Kx-10<br>Kx-12 | IM-397<br>IM-232<br>IM-504<br>IM-294<br>IM-402<br>IM-909<br>IM-939<br>IM-418<br>IM-444<br>IM-445 |
| Briggs Sand & Gravel, Inc.<br>Rte. 4 County Rd. 10 Box 303<br>Marietta, OH 45750<br>614-373-3363<br>James F. Briggs, pres. | Briggs Sand & Gravel, Inc. (365) | Washington | sand & gravel | 12,723 | 12,723 | Wn-508 | IM-57 |
| Broadway Sand & Gravel, Inc.<br>2000 Sandridge Dr.<br>Dayton, OH 45439<br>513-299-1166<br>Herbert H. Cornett, pres. | Broadway Sand & Gravel, Inc. (225) | Montgomery | sand & gravel | 81,728 | 81,728 | My-65 | IM-594 |
| Broshear Contractors, Inc.<br>2520 Millville-Ross Rd.<br>Hamilton, OH 45013<br>513-863-3388<br>Gerald Broshear, pres. | Ross Township Gravel (31) | Butler | sand & gravel | [15] | | Br-48 | IM-562 |
| Brown County Rock Crusher<br>State Rte. 221<br>Georgetown, OH 45121<br>513-378-6456<br>Brown County Board of Commissioners | Brown County Rock Crusher (14) | Brown | limestone | [15] | | Bn-1 | |
| D & L Browning Excavating, Inc.<br>5593 Mason-Morrow-Millgrove Rd.<br>Morrow, OH 45152<br>513-899-3751<br>Daniel L. Browning, owner | Riverside Sand & Gravel (391) | Warren | sand & gravel | 40 | 10 | Wan-B[16] | IM-679 |
| Karl Brugmann Sand & Gravel, Inc.<br>8420 Weaver Rd.<br>Ravenna, OH 44266<br>216-626-3914<br>Donald H. Brugmann, owner | Karl Brugmann Sand & Gravel, Inc. (257) | Portage | sand & gravel | 79,390 | 72,895 | Pe-15 | IM-104 |

[15]No sales or production.
[16]No mine number has been assigned by the Division of Mines.
[17]This mine is not shown on the map.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Oscar Brugmann Sand & Gravel, Inc.<br>3828 Dudley Rd.<br>Mantua, OH 44255<br>216-274-8224<br>Roy Brugmann, pres. | Oscar Brugmann Sand & Gravel, Inc. (258) | Portage | sand & gravel | 405,296 | 460,000 | Pe-9 | IM-119 |
| James Bunnell, Inc.<br>5714 State Rte. 128<br>Cleves, OH 45002<br>513-353-1100<br>James Bunnell, pres. | James Bunnell, Inc. (123)<br>James Bunnell, Inc. (124) | Hamilton<br>Hamilton | sand & gravel<br>sand & gravel | 250<br>507,779 | 250<br>507,779 | Hmn-50<br>Hmn-59 | IM-205<br>IM-815 |
| Burlington Sand & Gravel Co.<br>P.O. Box 399<br>Chesapeake, OH 45619<br>614-894-5978<br>Vernon E. Collier, owner | Burlington Sand & Gravel Co. (170) | Lawrence | sand & gravel | 7,026 | 5,239 | Le-426 | IM-856 |
| C & S Contractors, Inc.<br>P.O. Box 42459<br>Cincinnati, OH 45242<br>513-791-7747<br>Raymond A. Conn, pres. | C & S Contractors, Inc. (356) | Warren | sand & gravel | [18] | | Wan-47 | IM-846 |
| Canton Aggregate<br>Div. of Central Allied Enterprises, Inc.<br>P.O. Box 80449<br>Canton, OH 44708-0449<br>216-477-6751<br>John A. Woodhall, Jr., pres. | Canton Aggregate (318)<br>Canton Aggregate (319) | Stark<br>Stark | sand & gravel<br>sand & gravel | 547,102<br>172,160 | 547,102<br>172,160 | Sk-681<br>Sk-689 | IM-164<br>IM-173 |
| Carpenter's Excavating<br>4224 Fernbrook St.<br>Kettering, OH 45440<br>513-299-7328<br>William D. Carpenter, owner | Carpenter's Excavating (228) | Montgomery | sand & gravel | [19] | | My-67 | IM-725 |
| Cedar Heights Clay Co.<br>Division of Resco Products, Inc.<br>P.O. Box 295<br>Oak Hill, OH 45656-0295<br>614-682-7794<br>William T. Tredennick, pres. | Shumate/Alban (21)<br>Cedarloo/Jenkins (22) | Jackson<br>Jackson | clay<br>clay | 13,608<br>10,695 | 13,608<br>10,695 | Jkn-1001<br>Jkn-1007 | IM-19, IM-336<br>IM-24 |
| Celotex Corp.<br>P.O. Box 280<br>Port Clinton, OH 43452<br>419-734-3153<br>W. D. Herbert, pres. | American #2 (1) | Ottawa | gypsum | 239,828 | 239,828 | Oa-2 | IM-344 |
| Central Ohio Coal Co.<br>P.O. Box 98<br>Cumberland, OH 43732<br>614-962-2013<br>J. E. Katlic, exec. v. pres. | Horse Run (73)<br>Tilton's Run (141)<br>Hoskinsville Stone Quarry (138) | Morgan<br>Muskingum<br>Noble | limestone<br>limestone<br>limestone | 80,404<br>[19]<br>197,706 | 80,404<br><br>197,706 | Mon-600<br>Ne-41<br>Ne-147 | IM-281<br>D-0559<br>IM-921 |
| Central Silica Co.<br>806 Market St.<br>P.O. Box 4477<br>Zanesville, OH 43702-4477<br>614-452-2775<br>James P. Snider, v. pres. & gen. mgr. | Millwood Sand Division (24)<br>Central Silica Co. (31) | Knox<br>Perry | sandstone<br>sandstone | 160,669<br>268,830 | 160,669<br>268,830 | Kx-1<br>Py-202 | IM-269<br>IM-14 |
| Charlestown Sand & Gravel<br>7845 State Rte. 5<br>Ravenna, OH 44266<br>216-296-9233<br>Raymond C. Sommers, partner | Charlestown Sand & Gravel (259) | Portage | sand & gravel | 39,130 | 39,130 | Pe-17 | IM-123 |
| Chattin Concrete<br>9978 State Rte. 220<br>P.O. Box 49<br>Waverly, OH 45690<br>614-947-4677<br>William H. & Jeffery Chattin, partners | Chattin Concrete (253) | Pike | sand & gravel | 115 | 0 | Pke-23 | IM-242 |
| Chesterhill Stone Co.<br>773 East State Rte. 60 NE<br>P.O. Box 599<br>McConnelsville, OH 43756<br>614-962-5621<br>Fred R. Price, pres. | Plant #2 (240)<br>Plant #1 (75)<br>Plant #3 (366) | Morgan<br>Muskingum<br>Washington | sand & gravel<br>limestone<br>sand & gravel | 233,897<br>466,903<br>122,433 | 215,182<br>451,873<br>141,576 | Mon-588<br>Mum-106<br>Wn-56 | IM-35<br>IM-297<br>IM-857 |

[18]No report filed in 1988.
[19]No sales or production.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Chesterville Sand & Gravel Co., Inc.<br>State Rte. 95 E<br>P.O. Box 51<br>Chesterville, OH 43317<br>419-768-3369<br>Carrol D. Gleason, pres. | Chesterville Sand & Gravel Co., Inc. (242) | Morrow | sand & gravel | 103,706 | 103,706 | Mw-10 | IM-258 |
| Christman Quarry<br>47278 Swazey Rd.<br>Lewisville, OH 43754<br>614-838-2475<br>Gerald L. Christman, owner | Christman Quarry (69) | Monroe | limestone | 87,239 | 87,239 | Me-501 | IM-76 |
| Clark Clay Co.<br>R.F.D. #6 Box 58<br>Millersburg, OH 44654<br>216-674-5150<br>Dwight S. Clark, owner | Clark Clay Co. (17) | Holmes | clay | 5,088 | 1,800 | Hs-56 | |
| Claycraft Co.<br>P.O. Box 866<br>Columbus, OH 43216<br>614-866-3300<br>P. W. Tefft, pres. | Claycraft Plant #4 Shale Pit (9)<br>Claycraft Plant #1 Clay Pit (73) | Franklin<br>Wyandot | shale<br>clay | 655,600<br>29,763 | 655,600<br>29,763 | Fn-1<br>Wt-7 | IM-322<br>IM-407 |
| Cleveland Quarries Co.<br>P.O. Box 261<br>Amherst, OH 44001-0261<br>216-986-4501<br>R. C. Bechtel, pres. | Birmingham Quarry (14)<br>Amherst Quarries (27) | Erie<br>Lorain | sandstone<br>sandstone | 4,925<br>92,073 | 4,925<br>92,073 | Ee-21<br>Ln-3 | IM-416<br>IM-415 |
| Columbia Portland Cement Corp.<br>P.O. Box 1531<br>Zanesville, OH 43701<br>614-849-2311<br>W. P. Cannon, mgr. | Lyle Quarry (76)<br>(39)<br>Jonathon Mine (76) | Muskingum<br><br>Muskingum | limestone<br>shale<br>limestone | [20]<br>[20]<br>[20] | | Mum-24<br>Mum-24<br>Mum-91 | IM-830<br>IM-303<br>IM-830 |
| Con-Ag, Inc.<br>Rte. 1 County Hwy. 66A N<br>St. Marys, OH 45885<br>419-394-8870<br>Robert E. Hirschfeld &<br>Lee Kuck, owners | Con-Ag, Inc. (10) | Auglaize | limestone | 191,511 | 192,261 | Ae-31 | IM-744 |
| Connolly Construction Co., Inc.<br>825 W. Sixth St.<br>P.O. Box 271<br>Marysville, OH 43040<br>513-644-8831<br>Phillip Connolly, pres. | East Liberty Quarry (49) | Logan | limestone | 835,760 | 353,130 | Lgn-1 | IM-574 |
| Conotton Valley Quarries Co.<br>40580 Cadiz-Piedmont Rd.<br>Cadiz, OH 43907<br>614-942-4656<br>Nick J. Puskarich, pres. | Conotton Valley Quarries Co. (1) | Carroll | sandstone | 2,462 | 2,462 | Cl-102 | IM-278 |
| Cooper Sand & Gravel<br>P.O. Box 427<br>Russells Point, OH 43348<br>513-843-3426<br>Kenneth Cooper, partner | Cooper Sand & Gravel (411) | Logan | sand & gravel | 7,471 | 7,471 | Lgn-40 | IM-996 |
| County Line Sand & Gravel<br>659 W. County Line Rd.<br>Springfield, OH 45502<br>513-399-9200<br>John W. Martin, Jr., owner | County Line Sand & Gravel (53) | Clark | sand & gravel | [21] | | Ck-27 | IM-549 |
| Cox Gravel, Inc.<br>P.O. Box 127<br>Dresden, OH 43821<br>614-754-2011<br>Richard Cox, pres. | Jennings-Lacy (244)<br>Prospect (243) | Muskingum<br>Muskingum | sand & gravel<br>sand & gravel | 241,191<br>16,591 | 227,617<br>22,553 | Mum-799<br>Mum-863 | IM-317<br>IM-264 |
| Crates Excavating<br>14628 State Rte. 31<br>Kenton, OH 43326<br>419-675-1558<br>J. Roger & Ruth Crates, owners | Crates #1 (406) | Hardin | sand & gravel | [21] | | Hdn-5 | IM-907 |
| Cravat Coal Co.<br>40580 Cadiz-Piedmont Rd.<br>Cadiz, OH 43907<br>614-942-4656<br>Anthony Puskarich, pres. | Dover Pit (13) | Belmont | limestone | 17,273 | 16,590 | Bt-119 | IM-733 |

[20]No report filed in 1988.
[21]No sales or production.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| R. A. Cruise Sand & Gravel, Inc.<br>7639 State Rte. 14 R.D. #4<br>Ravenna, OH 44266<br>216-296-4087<br>Larry R. Cruise, pres. | R. A. Cruise Sand & Gravel, Inc. (261) | Portage | sand & gravel | 56,121 | 56,121 | Pe-45 | IM-139 |
| Cummins Family Contracting<br>7703 Rd. 207<br>DeGraff, OH 43318<br>513-585-4032<br>Richard E. Cummins, owner | Cummins Family Contracting (190) | Logan | sand & gravel | 1,232 | 1,232 | Lgn-38 | IM-881 |
| Cunningham Asphalt Paving, Inc.<br>P.O. Box 370<br>Wheelersburg, OH 45694<br>614-574-6184<br>Karl Cunningham, pres. | Cunningham Pit (304) | Scioto | sand & gravel | [22] | | So-83 | IM-211 |
| D & D Sand Bank<br>Rte. 7 Box 473<br>South Point, OH 45680<br>614-377-4765<br>Dale M. Pemberton, owner | D & D Sand Bank (388) | Lawrence | sand & gravel | 3,913 | 3,913 | Le-445 | IM-928 |
| D & J Energy, Inc.<br>Rte. 1 Box 351<br>Bidwell, OH 45614<br>614-245-5316<br>John P. Holley, pres. | D & J Energy, Inc. (46) | Jackson | limestone | 3,350 | 0 | Jkn-583 | IM-894 |
| D & W Sand & Gravel<br>10677 Wren Rd.<br>Mechanicsburg, OH 43044<br>513-834-2548<br>Dale Potter, owner | D & W Sand & Gravel (49) | Champaign | sand & gravel | [23] | | Cpn-21 | IM-616 |
| Davis Sand & Gravel<br>311 Mt. Zion Rd. SW<br>Lancaster, OH 43130<br>614-687-1876<br>Richard P. Davis, owner | Davis Sand & Gravel (91) | Fairfield | sand & gravel | [23] | | Fd-12 | IM-451 |
| Davon, Inc.<br>4281 Roush Rd.<br>Hillsboro, OH 45133<br>513-393-4211<br>John B. Patton, pres. | Plum Run Stone Division (1)<br>Highland Stone Division (41) | Adams<br>Highland | limestone<br>limestone | 1,271,315<br>558,822 | 1,214,979<br>566,128 | Ads-1<br>Hd-2 | IM-237<br>IM-230 |
| Demmy Sand & Gravel<br>4324 Fairfield Pike<br>Springfield, OH 45502<br>513-325-8840<br>Woodrow Demmy, owner | Demmy Sand & Gravel (54) | Clark | sand & gravel | 11,156 | 11,156 | Ck-502 | IM-375 |
| Dennis Clay Co.<br>State Rte. 37<br>P.O. Box 10922<br>New Lexington, OH 43764<br>614-342-5269<br>Tom L. Dennis, owner | Corder Mine (74)<br>Olson Mine (43)<br>Buzzard Glory (75) | Muskingum<br>Perry<br>Perry | clay<br>clay<br>clay<br>shale | 11,805<br>4,524<br>13,500<br>30,600 | 11,805<br>4,524<br>165,000<br>50,000 | Mum-D<br>Py-296<br>Py-331 | IM-917<br>IM-37<br>IM-920 |
| Diamond Crystal Salt Co.<br>2065 Manchester Rd.<br>P.O. Box 149<br>Akron, OH 44309-0149<br>216-745-0031<br>Roy C. Satchell, pres. | Diamond Crystal Salt Co. (4) | Summit | salt | 66,307 | 66,976 | St-9127[24] | |
| Diamond Stone Quarries, Inc.<br>P.O. Box 66<br>Albany, OH 45710<br>614-698-2431<br>W. E. Engle, pres. | Plant #2 (9) | Athens | limestone | 14,385 | 14,385 | As-533[25] | IM-17 |
| A. J. Diana Sons, Inc.<br>1916 Erie Ave. NW<br>P.O. Box 488<br>Massillon, OH 44648<br>216-832-5904<br>Virgil V. Diana, pres. | Neidert Pit (320) | Stark | sand & gravel | 25,170 | 17,669 | Sk-694 | IM-858 |

[22]No sales or production.
[23]No report filed in 1988.
[24]This mine was operated 1st quarter 1988 by Diamond Crystal Salt Co. and 2nd through 4th quarters by International Salt Co.
[25]This mine was operated in January 1988 by Diamond Stone Quarries, Inc. and February through December by R. A. Eberts Co., Inc.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Dingledine Trucking Service<br>4560 Oxford-Trenton Rd.<br>Oxford, OH 45056<br>513-726-5258<br>Gerald Dingledine, owner | Dingledine Trucking Service (32)<br>Dingledine Trucking Servie (133) | Butler<br>Hamilton | sand & gravel<br>sand & gravel | 76,825<br>[26] | 49,959 | Br-50<br>Hmn-65 | IM-739<br>IM-736 |
| Dome Minerals, Inc.<br>P.O. Box 11<br>Hanoverton, OH 44423<br>216-223-1413<br>Fred A. Rogers, pres. | Dome Minerals, Inc. (79) | Columbiana | shale | 475 | 0 | Ca-947 | IM-935 |
| Dravo Basic Materials Co., Inc.<br>5253 Wooster Rd.<br>Cincinnati, OH 45226<br>513-321-2700<br>H. Donovan Ross, pres. | Fairfield Plant (33)<br>Ross Plant (34)<br>Cleves Plant (126)<br>Camp Dennison Plant (127)<br>Newtown Plant (128)<br>Cleves Plant (131)<br>Newtown Plant (128)<br>Apple Grove Plant (209)<br>South Lebanon Plant (352) | Butler<br>Butler<br>Hamilton<br>Hamilton<br>Hamilton<br>Hamilton<br>Hamilton<br>Meigs<br>Warren | sand & gravel<br>sand & gravel<br>sand & gravel<br>sand & gravel<br>sand & gravel<br>sand & gravel<br>sand & gravel<br>sand & gravel<br>sand & gravel | 45,941<br>384,145<br>[27a]<br>772,560<br>167,200<br>441,765<br>1,000,246<br>0<br>[27a] | 0<br>607,704<br><br>998,500<br>146,426<br>783,670<br>1,115,385<br>1,045,820 | Br-14<br>Br-29<br>Hmn-3<br>Hmn-5<br>Hmn-11<br>Hmn-68<br>Hmn-70<br>Ms-205<br>Wan-41[27b] | IM-147<br>IM-149<br>IM-137, IM-801<br>IM-148<br>IM-133<br>IM-747<br>IM-133<br>IM-30<br>IM-629 |
| Dry Creek Gravel Co.<br>2097 Mt. Vernon Rd.<br>Newark, OH 43055<br>614-366-3333<br>Gail Wolfe, pres. | Plant #2 (176)<br>Water Works (400)<br>Plant #3 (177) | Licking<br>Licking<br>Licking | sand & gravel<br>sand & gravel<br>sand & gravel | 149,000<br>[27a]<br>58,100 | 149,000<br><br>58,100 | Lg-31<br>Lg-502<br>Lg-DC | IM-246<br>IM-956<br>IM-354 |
| C. E. Duff & Son, Inc.<br>9042 State Rte. 117<br>P.O. Box 265<br>Huntsville, OH 43324<br>513-686-2488<br>James E. Duff, pres. | C. E. Duff & Son, Inc. (50)<br>Duff Sand Co. (182)<br>C. E. Duff & Son, Inc. (420)<br>C. E. Duff & Son, Inc. (183) | Logan<br>Logan<br>Logan<br>Logan | limestone<br>sand & gravel<br>sand & gravel<br>sand & gravel | 225,404<br>74,085<br>79,047<br>[27a] | 225,404<br>74,085<br>79,047 | Lgn-15<br>Lgn-31<br>Lgn-36<br>Lgn-39 | IM-453<br>IM-454<br>IM-1007<br>IM-887 |
| East Ohio Limestone Co.<br>P.O. Box 699<br>Hartville, OH 44632<br>216-877-2636<br>Donald D. Phillips, pres. | East Ohio Limestone Co. (113)<br>(52) | Stark | limestone<br>clay | 149,669<br>483 | 149,669<br>483 | Sk-663 | IM-5 |
| Eberhart Coal, Inc.<br>Rte. 3 Box 89<br>Dover, OH 44622-9507<br>216-343-5677<br>Phillip H. Eberhart, pres. | Eberhart #2 Hott Strip (78) | Tuscarawas | clay | 13,952 | 10,796 | Ts-1994 | IM-985 |
| R. A. Eberts Co., Inc.<br>P.O. Box 191<br>Jackson, OH 45640<br>614-286-2975<br>Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners | Diamond Stone (9) | Athens | limestone | 303,779 | 303,779 | As-533[28] | IM-17 |
| Eldean Gravel Co.<br>135 E. Main St.<br>P.O. Box 440<br>Tipp City, OH 45371<br>513-667-4431<br>James Ernst, pres. | Eldean Gravel Co. (215) | Miami | sand & gravel | 83,967 | 82,063 | Mi-2[29] | IM-367 |
| Elm Spring Farm<br>938 State Rte. 207<br>Chillicothe, OH 45601<br>614-775-5525<br>Joanna J. Haskins, owner | Elm Spring Farm (297) | Ross | sand & gravel | 128 | 128 | Rs-26 | IM-922 |
| Englewood Sand & Gravel Co., Inc.<br>355 E. Wenger Rd.<br>P.O. Box 96<br>Englewood, OH 45322<br>513-836-2637<br>Denzil W. Wilson, pres. | Englewood Sand & Gravel Co., Inc. (392) | Montgomery | sand & gravel | [27a] | | My-64 | IM-795 |
| M. T. Epling Co.<br>1725 Eastern Ave.<br>Gallipolis, OH 45631<br>614-446-2742<br>M. T. Epling, pres. | Georges Creek Pit (105)<br>M. T. Epling Sand & Gravel Plant (106) | Gallia<br>Gallia | sand & gravel<br>sand & gravel | 5,375<br>[27a] | 5,375 | Ga-243<br>Ga-245 | IM-238 |

[26]No report filed in 1988.
[27a]No sales or production.
[27b]See also Carl E. Oeder & Sons Sand & Gravel.
[28]This mine was operated in January 1988 by Diamond Stone Quarries, Inc. and February through December by R. A. Eberts Co., Inc.
[29]This mine was operated 1st through 3rd quarters 1988 by Eldean Gravel Co. and 4th quarter by American Aggregates Corp.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Erie Blacktop, Inc.<br>4507 Tiffin Ave.<br>P.O. Box 2308<br>Sandusky, OH 44870<br>419-625-7374<br>Dean Wikel, pres. | Erie Blacktop Quarry (24)<br>Erie Blacktop Sand & Gravel Pit (417) | Erie<br>Huron | limestone<br>sand & gravel | 41,019<br>25,750 | 41,019<br>25,750 | Ee-27<br>Hrn-16 | IM-608<br>IM-975 |
| Erie Sand & Gravel Co.<br>P.O. Box 153<br>Erie, PA 16512-0153<br>814-453-6721<br>Sidney E. Smith, Jr., pres. | Erie Sand & Gravel Co. (1) | Lake Erie | sand & gravel (dredged) | 93,730 | 93,730 | Ee-D[30] | |
| Ernst Aggregates, Inc.<br>135 E. Main St.<br>P.O. Box 440<br>Tipp City, OH 45371<br>513-667-4431<br>James Ernst, pres. | Spring Valley Plant (404) | Greene | sand & gravel | 374,887 | 343,400 | Ge-42[31] | IM-954 |
| Ernst Gravel Co.<br>135 E. Main St.<br>P.O. Box 440<br>Tipp City, OH 45371<br>513-667-4431<br>James Ernst, pres. | Ernst Gravel Co. (216) | Miami | sand & gravel | 198,436 | 179,525 | Mi-6[32] | IM-356 |
| Ernst Material Service, Inc.<br>5827 Mason-Morrow-Millgrove Rd.<br>Morrow, OH 45152<br>513-233-5555<br>John Ernst, pres. | Ernst Material Service, Inc. (429) | Warren | sand & gravel | 84,441 | 84,441 | Wan-46 | IM-679 |
| Fairfield Ready Mix<br>P.O. Box 9175<br>Fairfield, OH 45014<br>513-868-7878<br>Rex Allan, owner | Fairfield Ready Mix (36) | Butler | sand & gravel | 450,711 | 453,290 | Br-53 | IM-903 |
| Feikert Sand & Gravel, Inc.<br>6971 County Rd. 189 Rte. 5<br>P.O. Box 365<br>Millersburg, OH 44654-9186<br>216-674-0038<br>Charles E. Feikert, pres. | Feikert Sand & Gravel, Inc. (154) | Holmes | sand & gravel | 51,627 | 51,627 | Hs-511 | IM-345 |
| Fenner Sand & Gravel, Inc.<br>7131 W. Fenner Rd.<br>Ludlow Falls, OH 45339<br>513-698-7048<br>Robert P. Snead, pres. | Woodville Concrete Corp. (222) | Miami | sand & gravel | 185,000 | 94,000 | Mi-4 | IM-472 |
| Ferris Coal Co., Inc.<br>371 South St.<br>East Palestine, OH 44413<br>216-426-9680<br>Theresa Ferris, pres. | Ferris Coal Co., Inc. (4)<br>(4) | Columbiana | clay<br>shale | [33]<br>[33] | | Ca-505 | IM-13 |
| Fleckenstein Farm Gravel Pit<br>11251 State Rte. 66<br>Minster, OH 45865<br>513-295-2417<br>Ferd J. Fleckenstein, owner | Fleckenstein Farm Gravel Pit (310) | Shelby | sand & gravel | 17,705 | 17,705 | Shy-12 | IM-528 |
| Fleming Construction Co., Inc.<br>P.O. Box 31<br>Marion, OH 43302<br>614-494-2476<br>Gerald E. Fleming, pres. | Fleming Construction Co., Inc. (197)<br>Fleming Construction Co., Inc. (423) | Marion<br>Marion | sand & gravel<br>sand & gravel | 8,825<br>[34] | 8,825 | Mn-16<br>Mn-F[30] | IM-171<br>IM-990 |
| Flesher Sand & Gravel, Inc.<br>3322 Clark Mill Rd.<br>Norton, OH 44203<br>216-745-9239<br>Dallas Flesher, owner | Flesher Sand & Gravel, Inc. (327) | Summit | sand & gravel | 8,932 | 8,932 | St-52 | IM-900 |
| Foureman's Sand & Gravel, Inc.<br>2791 Wildcat Rd.<br>Greenville, OH 45331<br>513-548-8626<br>Gary B. Foureman, pres. | Foureman's Sand & Gravel, Inc. (80) | Darke | sand & gravel | 38,782 | 38,782 | Dke-4 | IM-433 |

[30]No mine number has been assigned by the Division of Mines.
[31]This mine was operated 1st through 3rd quarters 1988 by Ernst Aggregates, Inc. and 4th quarter by American Aggregates Corp.
[32]This mine was operated 1st through 3rd quarters 1988 by Ernst Gravel Co. and 4th quarter by American Aggregates Corp.
[33]No report filed in 1988.
[34]No sales or production.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| The France Stone Co.<br>8130 Brint Rd.<br>P.O. Box 278<br>Sylvania, OH 43560-0278<br>419-882-0123<br>Ollie J. Risner, pres. | Waterville (52) | Lucas | limestone | 452,615 | 476,755 | Ls-1 | IM-575 |
| | Silica (53) | Lucas | limestone | 864,962 | 887,041 | Ls-3 | IM-580 |
| | Paulding (86) | Paulding | limestone | 301,548 | 277,964 | Pg-7 | |
| | Flat Rock (107) | Seneca | limestone | 948,216 | 1,432,801 | Sa-1 | IM-347 |
| | Bloomville (108) | Seneca | limestone | 297,877 | 344,701 | Sa-3 | IM-349 |
| | Bellevue (100) | Sandusky | limestone | [35] | | Sy-6 | IM-346 |
| | North Baltimore (128) | Wood | limestone | [35] | | Wd-2 | IM-576 |
| | Custar (129) | Wood | limestone | 234,857 | 266,810 | Wd-5 | IM-473 |
| Fredericktown Sand & Gravel Co.<br>P.O. Box 112<br>Fredericktown, OH 43019<br>614-694-2096<br>Richard R. Stander, pres. | Fredericktown Sand & Gravel Co. (159) | Knox | sand & gravel | 17,518 | 0 | Kx-13 | IM-343 |
| Frye Sand & Gravel, Inc.<br>3049 S. Denmark Rd.<br>P.O. Box 3<br>Dorset, OH 44032<br>216-858-2627<br>Harold L. Frye, owner | Frye Sand & Gravel, Inc. (9) | Ashtabula | sand & gravel | 3,720 | 3,720 | Asa-10 | IM-198 |
| Fuhrer Farms & Mining<br>258 Ninth St. SW<br>Strasburg, OH 44680<br>216-878-5256<br>Jack Fuhrer, partner | Fuhrer Farms & Mining (136) | Tuscarawas | limestone | 1,292 | 1,292 | Ts-1961 | IM-845 |
| G & M Supply, Inc.<br>dba Clinton Stone, Inc.<br>1203 N. Pennsylvania Ave.<br>P.O. Box 468<br>Wellston, OH 45692<br>614-384-5659<br>Bonny A. Huffman, pres. | Sands Hill Strip (124) | Vinton | limestone | 247,660 | 247,660 | Vn-174 | D-0309 |
| Ganges Gravel<br>153 North Gambel St.<br>P.O. Box 42<br>Shelby, OH 44875<br>419-342-5361<br>J. J. Scott, owner | Ganges Gravel (289) | Richland | sand & gravel | [36] | | Rd-18 | IM-670 |
| John L. Garber Materials, Inc.<br>Rte. 8<br>Lexington, OH 44904<br>419-884-1567<br>John L. Garber, pres. | John L. Garber Materials, Inc. (290) | Richland | sand & gravel | 271,764 | 280,000 | Rd-14 | IM-436 |
| General Clay Products Corp.<br>P.O. Box 236<br>Baltic, OH 43804-0236<br>216-897-7171<br>Harold B. Epler, Jr., pres. | Drescher Pit (6) | Coshocton | clay | 812 | 812 | Cn-787 | IM-610 |
| | (6) | | shale | 20,891 | 20,891 | | |
| | Troyer Pit (18) | Holmes | shale | 6,737 | 6,737 | Hs-77 | IM-545 |
| General Clay Products Corp.<br>P.O. Box 550<br>Logan, OH 43138<br>614-385-5616<br>Harold B. Epler, Jr., pres. | General Clay Products Corp. (12) | Hocking | clay | 19,402 | 19,402 | Hg-205 | IM-21 |
| | (12) | | shale | 18,829 | 18,829 | | |
| General Clay Products Corp.<br>P.O. Box 340<br>Wadsworth, OH 44281<br>216-335-1515<br>Harold B. Epler, Jr., pres. | General Clay Products Corp. (37) | Medina | shale | 47,391 | 47,391 | Ma-6 | IM-455 |
| Gerken Materials, Inc.<br>P.O. Box 607<br>Napoleon, OH 43545<br>419-533-2421<br>Julian A. Gerken, pres. | Gerken Materials, Inc. (147) | Henry | sand & gravel | 7,437 | 140,440 | Hy-5 | |
| Gibson Sand & Gravel Co.<br>1385 Knorr Rd.<br>Galion, OH 44833<br>419-468-5527<br>Arthur T. Gibson, owner | Gibson Sand & Gravel Co. (75) | Crawford | sand & gravel | [36] | | Cd-3 | IM-693 |
| Glen-Gery Corp.<br>County Rd. 9<br>P.O. Box 207<br>Iberia, OH 43325<br>419-468-5002<br>Richard Boxall, pres. | Glen-Gery Corp. (36) | Marion | shale | 116,277 | 116,277 | Mn-7 | IM-309 |

[35]No sales or production.
[36]No report filed in 1988.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Goodwin Sand & Gravel, Inc.<br>126 S. Norton St.<br>Mt. Vernon, OH 43050<br>614-392-7971<br>Don E. Mill, pres. | Goodwin Sand & Gravel, Inc. (160) | Knox | sand & gravel | 107,395 | 138,500 | Kx-7 | IM-235 |
| Gottron Bros. Co.<br>100 South Stone St.<br>Fremont, OH 43420<br>419-332-5281<br>Thomas P. Gottron, Jr., v. pres. | Gottron Bros. Co. (101) | Sandusky | limestone | 109,538 | 110,076 | Sy-5 | IM-259 |
| The Gravel Co.<br>325 Clark Rd.<br>P.O. Box 15501<br>Cincinnati, OH 45215<br>513-761-4980<br>Roy B. Schweitzer, pres. | The Gravel Co. (63) | Clinton | sand & gravel | [37] | | Cln-10 | IM-638 |
| Gregory Materials Co.<br>14133 U.S. Rte. 23 N<br>Waverly, OH 45690<br>614-947-5559<br>Ernest Gregory, owner | Plant #1 (254) | Pike | sand & gravel | [38] | | Pke-30 | IM-786 |
| Gregory Stone Co., Inc.<br>3244 S. Davis Rd.<br>Ludlow Falls, OH 45339<br>513-275-7455<br>William T. Gregory, Jr.,pres. | Gregory Quarry (65) | Miami | limestone | 3,402 | 3,402 | Mi-16 | IM-414 |
| Gwin Contracting Co.<br>P.O. Box 205<br>Columbiana, OH 44408<br>216-482-2442<br>Lyle D. Gwin, pres. | Gwin Contracting Co. (30) | Mahoning | sandstone | 34,709 | 34,709 | Mg-62 | IM-599 |
| H & H Utilities Co.<br>7307 S. Kessler-Frederick Rd.<br>West Milton, OH 45383<br>513-223-6752<br>Gerald Hochwalt, pres. | H & H Gravel (229) | Montgomery | sand & gravel | [38] | | My-68 | IM-646 |
| H & M Sand & Gravel Co.<br>1022 Blanchard Ave.<br>P.O. Box 497<br>Findlay, OH 45839<br>419-422-5923<br>Ivan D. Hobbs, pres. | H & M Sand & Gravel Co. (380)<br>H & M Sand & Gravel Co. (380)<br>H & M Sand & Gravel Co. (381) | Wyandot<br>Wyandot<br>Wyandot | sand & gravel<br>sand & gravel<br>sand & gravel | 114,184<br>0<br>[37] | 114,184<br>34,395 | Wt-5[39]<br>Wt-15[39]<br>Wt-18[39] | IM-376<br>IM-376<br>IM-551 |
| J. M. Hamilton & Sons Co., Inc.<br>1974 Marion-Bucyrus Rd.<br>Marion, OH 43302<br>614-382-2189<br>O. E. & A. M. Hamilton, owners | J. M. Hamilton & Sons Co., Inc. (59) | Marion | limestone | 95,232 | 95,232 | Mn-2 | IM-423 |
| Hard Rocks, Inc.<br>9340 State Rte. 5 NE<br>Kinsman, OH 44428<br>216-876-1565<br>Daniel White, pres. | Hard Rocks, Inc. (40) | Trumbull | sandstone | 30,946 | 48,105 | Tl-13 | IM-777 |
| Hardin Quarry Co., Inc.<br>12484 State Rte. 701<br>Kenton, OH 43326<br>419-675-1327<br>Richard Pees, pres. | Hardin Quarry Co., Inc. (38) | Hardin | limestone | 137,238 | 137,238 | Hdn-2 | IM-443 |
| Harrison Sand & Gravel Co.<br>10980 Campbell Rd.<br>Harrison, OH 45030<br>513-637-5174<br>Donald Gauck, mgr. | Harrison Sand & Gravel Co. (135) | Hamilton | sand & gravel | 108,413 | 106,356 | Hmn-17 | IM-295 |
| Hartville Sand & Gravel, Inc.<br>P.O. Box 1009<br>Hartville, OH 44632<br>216-877-9613<br>William H. Leach, Sr., pres. | Hartville Sand & Gravel, Inc. (321) | Stark | sand & gravel | 1,751 | 0 | Sk-182 | IM-67 |

[37]No sales or production.
[38]No report filed in 1988.
[39]This mine was operated 1st through 3rd quarters 1988 by H & M Sand & Gravel Co. and 4th quarter by National Lime & Stone Co.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Haubeil & Sons Asphalt & Materials, Inc.<br>691 Marietta Pike<br>Chillicothe, OH 45601<br>614-773-6358<br>Robert & George Haubeil, co-owners | Haubeil & Sons Asphalt & Materials, Inc. (298) | Ross | sand & gravel | 57,532 | 57,532 | Rs-24 | IM-735 |
| Haueter Sand & Gravel, Inc.<br>P.O. Box 206<br>Chardon, OH 44024<br>216-286-9482<br>Donald H. Haueter, pres. | Haueter Sand & Gravel, Inc. (108) | Geauga | sand & gravel | 252,931 | 252,931 | Gea-29 | IM-215 |
| Heiser Sand & Gravel<br>P.O. Box 2491<br>North Canton, OH 44720<br>216-499-8201<br>Richard L. Heiser, owner | Heiser Sand & Gravel (322)<br>Heiser Sand & Gravel (323) | Stark<br>Stark | sand & gravel<br>sand & gravel | [40]<br>14,198 | <br>0 | Sk-206<br>Sk-688 | IM-715<br>IM-763 |
| Heiser Stone Co.<br>P.O. Box 2491<br>North Canton, OH 44720<br>216-499-8201<br>Richard L. Heiser, owner | Heiser Stone Co. (55)<br>Heiser Stone Co. (397) | Mahoning<br>Tuscarawas | limestone<br>sand & gravel | [40]<br>3,278 | <br>0 | Mg-43<br>Ts-1977 | IM-723<br>IM-692 |
| Hillsdale Sand & Gravel, Inc.<br>P.O. Box 223<br>Archbold, OH 43502<br>419-445-1015<br>Dean Miller, pres. | Hillsdale Sand & Gravel, Inc. (82) | Defiance | sand & gravel | 7,062 | 7,062 | De-2 | IM-765 |
| Hilltop Aggregate, Inc.<br>P.O. Box 362<br>Mogadore, OH 44260<br>216-628-4000<br>Robert W. West, pres. | Hilltop Aggregate, Inc. (262) | Portage | sand & gravel | 379,947 | 379,947 | Pe-56 | IM-127 |
| Hilltop Basic Resources, Inc.<br>630 Vine St.<br>Cincinnati, OH 45202<br>513-651-5000<br>Thomas D. Harrington, pres. | Fairborn Aggregate Plant (112)<br>West Carrollton Aggregate Plant (232) | Clark, Greene<br>Montgomery | sand & gravel<br>sand & gravel | 576,824<br>709,431 | 581,068<br>602,806 | Ge-4<br>My-19 | IM-394<br>IM-401 |
| Hilltop Basic Resources, Inc.<br>dba Enon Washed Sand & Gravel Co.<br>1665 Enon-Donnelsville Rd.<br>P.O. Box 363<br>Enon, OH 45323<br>513-299-6058<br>Thomas D. Harrington, pres. | Enon Washed Sand & Gravel Co. (57) | Clark | sand & gravel | 296,338 | 231,360 | Ck-3 | IM-463 |
| Hocking County Engineer<br>1286 California Ave.<br>Logan, OH 43138-8999<br>614-385-8543<br>Douglas A. Neff, admin. asst. | Hocking County Gravel Pit (150) | Hocking | sand & gravel | [40] | | Hg-296 | IM-559 |
| Hocking Valley Concrete, Inc.<br>35255 Hocking Dr.<br>Logan, OH 43138<br>614-385-2165<br>William G. Vaughn, pres. | Hocking Valley Concrete (151) | Hocking | sand & gravel | [41] | | Hg-262 | IM-41 |
| Tom Hollinger Excavating<br>2097 Hollansburg-Arcanum Rd.<br>New Madison, OH 45346<br>513-996-5381<br>Thomas W. Hollinger, leasee | Hollinger Gravel Plant (81) | Darke | sand & gravel | 2,164 | 2,164 | Dke-10 | IM-326 |
| Holmes Limestone Co.<br>P.O. Box 295<br>Berlin, OH 44610<br>216-893-2721<br>E. E. Mullet, pres. | 241 Plant (44)<br>(19)<br>Wayne Mines (45)<br>Bolivar Mine (76) | Holmes<br><br>Holmes, Wayne<br>Stark | limestone<br>clay<br>limestone<br>clay | 84,417<br>19,154<br>164,386<br>21,818 | 87,890<br>19,164<br>159,810<br>21,818 | Hs-67<br><br>Hs-79[42]<br>Sk-235 | IM-768<br><br>IM-656<br>IM-945 |
| Honey Creek Stone Co.<br>P.O. Box 286<br>Petersburg, OH 44454<br>216-542-2372<br>D. B. Carson, pres. | Honey Creek Stone Co. (56) | Mahoning | limestone | 167,167 | 197,670 | Mg-54 | IM-93 |

[40]No sales or production.
[41]No report filed in 1988.
[42]All sales and production are from Wayne County.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Huck Farms<br>R.F.D. 3<br>McConnelsville, OH 43756<br>614-962-3467<br>Louis & Cecil Huck, partners | Huck Farms (241) | Morgan | sand & gravel | [43] | | Mon-599 | |
| Hugo Sand Co.<br>7055 State Rte. 43<br>Kent, OH 44240<br>216-673-4710<br>Dorothy M. Strohm, pres. | Hugo Sand Co. (264) | Portage | sand & gravel | 68,466 | 42,557 | Pe-10 | IM-138 |
| Humphrey Farms<br>P.O. Box 128<br>Reedsville, OH 45772-0128<br>614-378-6295<br>C. Ed Humphrey, owner | Vivian Humphrey (210) | Meigs | sand & gravel | 1,920 | 1,920 | Ms-295 | |
| Hydraulic Press Brick Co.<br>8900 Hemlock Rd.<br>P.O. Box 31330<br>Independence, OH 44131<br>314-621-9306<br>W. W. Allen, Jr., pres. | Hydraulic Press Brick Co. (7) | Cuyahoga | shale | 238,913 | 228,174 | Cya-19 | IM-95 |
| Indian Creek Sand & Gravel Co.<br>P.O. Box 330<br>Oxford, OH 45056<br>513-523-8805<br>Gaston Bowling, pres. | Indian Creek Sand & Gravel Co. (37) | Butler | sand & gravel | 23,572 | 23,572 | Br-40 | IM-493 |
| International Salt Co.<br>P.O. Box 6920<br>Cleveland, OH 44101<br>216-651-7200<br>John L. Ryon, Jr., pres. | Cleveland Mine (1)<br>International Salt Co. (4) | Cuyahoga<br>Summit | salt<br>salt | 2,043,244<br>160,677 | 1,917,863<br>174,896 | Cya-30<br>St-9127[44] | |
| J. P. Sand & Gravel Co.<br>5911 Lockbourne Rd.<br>P.O. Box 2<br>Lockbourne, OH 43137<br>614-497-0083<br>Richard A. Roberts, pres. | J. P. Sand & Gravel Co. (98) | Franklin | sand & gravel | 471,184 | 393,637 | Fn-52 | IM-191 |
| Dan Jacobs<br>2951 Crider Rd.<br>Mansfield, OH 44907<br>419-529-8447<br>Daniel R. & Cassandra Jacobs, owners | Dan Jacobs (6) | Richland | peat | 2,078 | 2,078 | Rd-19 | |
| Janson Soil Service, Inc.<br>1492 Mechanicsville Rd.<br>Rock Creek, OH 44084<br>216-466-3835<br>Peter E. Janson, Jr., pres. | Janson Soil Service, Inc. (10) | Ashtabula | sand & gravel | 190 | 60 | Asa-14 | IM-563 |
| Jarrett Sand Co.<br>6505 Skadden Rd.<br>Sandusky, OH 44870<br>419-359-1750<br>James Jarrett, owner | Jarrett Sand Co. (84) | Erie | sand & gravel | 2,494 | 2,494 | Ee-29 | |
| Jefferson Materials Co.<br>8505 State Rte. 14<br>Streetsboro, OH 44241<br>216-626-3816<br>John E. Lower, pres. | Howitt (265) | Portage | sand & gravel | 285,658 | 273,645 | Pe-63 | IM-82 |
| Joseph Sand & Gravel<br>Rte. 6 Boundary Rd.<br>Wapakoneta, OH 45895<br>419-568-3787<br>Mary J. Joseph, owner | Joseph Sand & Gravel (23) | Auglaize | sand & gravel | 8,951 | 8,457 | Ae-23 | IM-508 |
| John W. Karch Stone Co.<br>P.O. Box 357<br>Celina, OH 45822<br>419-586-2335<br>George Karch, pres. | John W. Karch Stone Co. (62) | Mercer | limestone | 93,615 | 93,615 | Mr-1[45] | IM-592 |
| Karg Sand & Gravel Co.<br>2088 Congress Lake Rd.<br>Mogadore, OH 44260<br>216-673-1338<br>Thomas R. Karg, owner | Karg Sand & Gravel Co. (266) | Portage | sand & gravel | 24,200 | 25,590 | Pe-83 | IM-179 |

[43]No sales or production.
[44]This mine was operated 1st quarter 1988 by Diamond Crystal Salt Co. and 2nd through 4th quarters by International Salt Co.
[45]This mine was operated January through May 1988 by John W. Karch Stone Co. and June through December by Stoneco.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Keener Sand & Clay Co.<br>330 Dering Ave.<br>Columbus, OH 43207<br>614-444-1105<br>Carl F. Weiffenbach, pres. | Huron Plant (85)<br>Gallia Plant (107) | Erie<br>Gallia | sand & gravel<br>sand & gravel | 2,136<br>1,783 | 2,136<br>1,783 | Ee-5<br>Ga-507 | <br>IM-23 |
| Alvin Keiffer Trucking & Excavating<br>296 State Rte. 604<br>Polk, OH 44866<br>419-869-7238<br>Alvin Keiffer, owner | Dinsmore Pit (5) | Ashland | sand & gravel | 594 | 90 | Ald-12 | IM-579 |
| Kimble Clay & Limestone Co.<br>Rte. 1 Box 386<br>Dover, OH 44622<br>216-343-1226<br>Floyd E. Kimble, owner | Kimble Clay & Limestone Co. (117)<br>(41)<br>(63)<br>(63) | Tuscarawas | limestone<br>sandstone<br>clay<br>shale | 132,359<br>9,969<br>882,347<br>444,557 | 132,359<br>9,969<br>882,347<br>444,557 | Ts-1818 | IM-9 |
| King Limestone, Inc.<br>11300 State Rte. 340<br>Cumberland, OH 43732<br>614-638-3942<br>Duane King, pres. | King Limestone, Inc. (79) | Noble | limestone | 114,686 | 114,686 | Ne-106 | IM-85 |
| Kinsman Sand & Gravel Co.<br>9443 State Rd.<br>Kinsman, OH 44428<br>216-876-3321<br>Glenn B. Harnett, pres. | Kinsman Sand & Gravel Co. (11) | Ashtabula | sand & gravel | 97,037 | 100,600 | Asa-17 | IM-886 |
| Kipp's Gravel Co., Inc.<br>4987 State Rte. 222<br>Batavia, OH 45103<br>513-732-1024<br>Melvin M. Kipp, pres. | Kipp's Gravel Co., Inc. (61) | Clermont | sand & gravel | 91,879 | 91,879 | Ct-7 | IM-432 |
| Kirby's Sand & Gravel, Inc.<br>4876 County Hwy. 43<br>Upper Sandusky, OH 43351<br>419-927-2260<br>Noble A. Kirby, owner | Kirby's Sand & Gravel, Inc. (382) | Wyandot | sand & gravel | 28,892 | 28,892 | Wt-17 | IM-604 |
| Charles Kishler<br>P.O. Box 5275<br>Junction City, OH 43748<br>614-385-5371<br>Charles L. Kishler, owner | Kishler Coal & Clay Co. (45)<br>(45) | Perry | clay<br>shale | [46]<br>[46] | | Py-297 | IM-850 |
| Kohl Industries<br>Rte. 1 Box 1083<br>New Philadelphia, OH 44663<br>216-874-4748<br>Jerry K. Kohl, owner | Black Hawk (114)<br>(2)<br>(53)<br>(53) | Stark | limestone<br>sandstone<br>clay<br>shale | 7,649<br>[47]<br>29,380<br>[47] | 142,649<br><br>174,380 | Sk-217 | IM-750 |
| Edward Kraemer & Sons, Inc.<br>Bolander Rd.<br>Clay Center, OH 43408<br>419-855-8388<br>David R. Kraemer, pres. | White Rock Quarry (82) | Ottawa | limestone | 1,170,784 | 1,059,534 | Oa-6 | IM-296 |
| L & I Trucking & Construction, Inc.<br>1842 Adams Rd.<br>Loveland, OH 45140<br>513-683-2045<br>Alvin Walker, pres. | L & I Trucking & Construction, Inc. (357) | Warren | sand & gravel | 105,280 | 60,151 | Wan-8 | IM-240 |
| L. & M. Excavators, Inc.<br>6075 Cleveland Ave. #205<br>Columbus, OH 43231<br>614-895-1056<br>Charles L. Lewis, pres. | Westerville Industrial Park (99) | Franklin | sand & gravel | 24,207 | 24,207 | Fn-54 | IM-847 |
| L & M Mineral Co.<br>Star Rte.<br>P.O. Box 54<br>Millersburg, OH 44654<br>216-893-2227<br>E. E. Mullet, pres. | Evans (64)<br>(64)<br>Luikert (65)<br>Holmes (66)<br>Spring (77)<br>(77) | Tuscarawas<br><br>Tuscarawas<br>Tuscarawas<br>Tuscarawas<br> | clay<br>shale<br>clay<br>shale<br>clay<br>shale | [47]<br>19,933<br>19,200<br>29,945<br>13,450<br>23,800 | <br>15,472<br>19,200<br>29,945<br>13,450<br>23,800 | Ts-1884<br><br>Ts-1914<br>Ts-1981<br>Ts-1982<br> | IM-6<br><br>IM-741<br>IM-621<br>D-0701 |
| Lafarge Corp.<br>Great Lakes Region<br>P.O. Box 160<br>Paulding, OH 45879<br>419-399-4861<br>Bertrand Collomb, pres. | Paulding Quarry (87)<br>(42) | Paulding | limestone<br>clay | 697,140<br>182,764 | 704,150<br>182,764 | Pg-1 | IM-513 |

[46]No report filed in 1988.
[47]No sales or production.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Lake Hope Asphalt, Inc.<br>State Rte. 278<br>P.O. Box 38<br>Nelsonville, OH 45764<br>614-753-1005<br>Francis Efaw, pres. | Lake Hope Asphalt, Inc. (21) | Athens | sand & gravel | 33,126 | 34,403 | As-1161 | IM-97 |
| Lakeside Sand & Gravel Co.<br>3431 Frost Rd.<br>Mantua, OH 44255<br>216-274-2569<br>Larry Kotkowski, partner | Lakeside Sand & Gravel Co. (268) | Portage | sand & gravel | 196,312 | 196,312 | Pe-40 | IM-190 |
| Lancaster Sand & Gravel Co.<br>3232 Logan-Lancaster Rd. SE<br>Lancaster, OH 43130<br>614-246-6315<br>Don E. Mill, pres. | Lancaster Sand & Gravel Co. (92) | Fairfield | sand & gravel | 453,783 | 363,150 | Fd-13 | IM-848 |
| Lappin's Farm<br>4309 Newcomer Rd.<br>Kent, OH 44240<br>216-673-5016<br>Harley G. Lappin, owner | Lappin's Farm (269) | Portage | sand & gravel | [48] | | Pe-82 | IM-452 |
| Latham Limestone, Inc.<br>P.O. Box 77<br>Latham, OH 45646<br>614-493-2677<br>Robert Murray, pres. | Latham Limestone, Inc. (91) | Pike | limestone | 310,522 | 276,019 | Pke-13 | IM-213 |
| Lazy Acre Farms, Inc.<br>1030 Forest Ave.<br>Zanesville, OH 43701<br>614-453-1003<br>Clarence M. Parsons, owner | Lazy Acre Farms, Inc. (396) | Muskingum | sand & gravel | [48] | | Mum-261 | IM-957 |
| Lerkis Asphalt Co., Inc.<br>550 Dan St.<br>Akron, OH 44310<br>216-376-7560<br>Gus J. Lerakis, pres. | Lerkis Asphalt Co., Inc. (328) | Summit | sand & gravel | [49] | | St-39 | IM-983 |
| Lingvai Peat Co.<br>R.R. 2 01693 Rd. 8<br>Edgerton, OH 43517<br>419-298-2058<br>Ronald Lingvai, mgr. | Lingvai Peat Co. (4) | Williams | peat | 90 | 0 | Ws-17 | |
| W. G. Lockhart & Sons<br>919 E. Cherry St.<br>Canal Fulton, OH 44614<br>216-854-2251<br>A. R. Lockhart, pres. | Lockhart (270) | Portage | sand & gravel | [49] | | Pe-WGL[50] | IM-568 |
| London Tile Co.<br>65 Walnut St.<br>New London, OH 44851<br>419-929-1551<br>R. N. Danison, pres. | Biglow (1) | Ashland | shale | 971 | 971 | Ald-1 | IM-334 |
| Lone Star Marquette<br>P.O. Box 8<br>Pedro, OH 45659-0008<br>614-532-4163<br>John B. Baines, pres. | Bear Run (30) | Lawrence | shale | [48] | | Le-308 | IM-31 |
| Luburgh, Inc.<br>4090 East Pike<br>Zanesville, OH 43701<br>614-453-9003<br>Otto Luburgh, v. pres. | A. I. Ball Farm (410) | Muskingum | sand & gravel | 12,000 | 0 | Mum-267 | IM-914 |
| Ludlow Stone, Inc.<br>3244 S. Davis Rd.<br>Ludlow Falls, OH 45339<br>513-698-3043<br>Lloyd B. Fry, pres. | Ludlow Stone, Inc. (66) | Miami | limestone | 204,387 | 284,271 | Mi-502 | IM-414 |
| Ludowici-Celadon Co.<br>P.O. Box 69<br>New Lexington, OH 43764<br>614-342-1995<br>Edward Ryser, pres. | Donnelly Pit (46) | Perry | shale | [49] | | Py-212 | IM-58 |

[48]No report filed in 1988.
[49]No sales or production.
[50]No mine number has been assigned by the Division of Mines.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| MacRitchie Materials, Inc.<br>P.O. Box 90<br>West Millgrove, OH 43467<br>419-288-2790<br>Donald B. MacRitchie, pres. | MacRitchie Materials, Inc. (130) | Wood | limestone | 158,151 | 130,131 | Wd-1 | IM-548 |
| Maple Grove Stone Co.<br>P.O. Box 456<br>Tiffin, OH 44883<br>419-992-4235<br>H. S. Bell, pres. | Maple Grove (106) | Seneca | limestone | 244,596 | 244,596 | Sa-2 | IM-352 |
| Marshall Quarry, Inc.<br>11199 State Rte. 124<br>Hillsboro, OH 45133<br>513-466-2636<br>Ronald M. Main, pres. | Marshall Quarry, Inc. (43) | Highland | limestone | 6,478 | 6,478 | Hd-4 | IM-406 |
| Donald Martin Contracting<br>1875 Roxanna-New Burlington Rd.<br>Waynesville, OH 45068<br>513-862-4182<br>Roger J. Martin, operator | Donald Martin Contracting (403) | Greene | sand & gravel | 612 | 612 | Ge-40 | IM-923 |
| Martin Farms, Inc.<br>2993 Woodsdale Rd.<br>Trenton, OH 45067<br>513-988-6318<br>James E. Martin, pres. | Martin Farms, Inc. (38) | Butler | sand & gravel | 344,687 | 344,687 | Br-52 | IM-814 |
| Martin Marietta Chemicals<br>Executive Plaza II<br>Hunt Valley, MD 21030<br>301-667-0200<br>W. W. Appel, pres. | Woodville Quarry (102) | Sandusky | limestone | 1,969,102 | 1,969,102 | Sy-1 | IM-537 |
| Masons Sand & Gravel Co.<br>2385 Rathmell Rd.<br>Columbus, OH 43207<br>614-491-3611<br>Gordon Masteller, pres. | Masons Sand & Gravel Co. (100) | Franklin | sand & gravel | 106,436 | 106,436 | Fn-11 | IM-234 |
| Massillon Washed Gravel Co.<br>6331 Blough Ave. SW<br>P.O. Box 167<br>Navarre, OH 44662<br>216-879-2132<br>Thomas E. Thomas, pres. | Massillon Washed Gravel Co. (325) | Stark | sand & gravel | 269,783 | 242,738 | Sk-607 | IM-102 |
| Maumee Haulers, Inc.<br>8647 Nebraska Ave.<br>Toledo, OH 43617<br>419-865-5013<br>Ike Parker, Jr., pres. | Nebraska Pit (193) | Lucas | sand & gravel | [51] | | Ls-20[52] | IM-888, IM-982 |
| Maxville Quarries, Inc.<br>7957 State Rte. 668 S<br>Logan, OH 43138<br>614-385-7087<br>David J. McCort, pres. | Maxville Quarries, Inc. (89) | Perry | limestone | 187,210 | 187,210 | Py-235 | IM-11, IM-515 |
| McCarthy Stone Quarry<br>6326 County Rd. 61<br>Upper Sandusky, OH 43351<br>419-294-2611<br>Charles H. McCarthy, owner | McCarthy Stone Quarry (133) | Wyandot | limestone | 91,778 | 91,778 | Wt-3 | IM-298 |
| Mecco, Inc.<br>2504 S. Main St.<br>Middletown, OH 45042<br>513-422-3651<br>David T. Morgan, pres. | Mecco, Inc. (39) | Butler | sand & gravel | 39,972 | 39,972 | Br-15 | IM-316 |
| Mechanicsburg Sand & Gravel, Inc.<br>25 Mill St.<br>P.O. Box 18<br>Mechanicsburg, OH 43044<br>513-834-2606<br>John D. Cushman, pres. | Mechanicsburg Sand & Gravel, Inc. (50) | Champaign | sand & gravel | 108,072 | 100,901 | Cpn-22 | IM-889 |
| Meigs County Commissioners<br>Rte. 2 Rocksprings Rd.<br>Pomeroy, OH 45769<br>614-992-2911<br>Henry Wells, county commissioner | Meigs County Pit (211) | Meigs | sand & gravel | 6,840 | 6,840 | Ms-301 | IM-619 |

[51]No report filed in 1988.
[52]This mine was operated 1st quarter 1988 by Maumee Haulers, Inc. and 2nd through 4th quarters by Sandman Sand & Stone, Inc.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Melvin Stone Co.<br>228 Melvin Rd.<br>Wilmington, OH 45177<br>513-584-2486<br>Craig Beam, pres. | Melvin Stone Co. (17)<br>Melvin Stone Co. (28)<br>Limestone, Inc. (92) | Clinton<br>Fayette<br>Pickaway | limestone<br>limestone<br>limestone | 696,610<br>111,076<br>164,694 | 696,610<br>111,076<br>164,694 | Cln-1<br>Fe-1<br>Pky-4 | IM-241<br>IM-831<br>IM-209 |
| Menuez Bros. Sand & Gravel Co.<br>5366 County Rd. 349 Rte. 1<br>Millersburg, OH 44654<br>216-674-4254<br>Gene Menuez, pres. | Fair Pit (153) | Holmes | sand & gravel | 105,665 | 105,665 | Hs-82 | IM-707 |
| Mesenburg Bros., Inc.<br>R.D. 1<br>Collins, OH 44826<br>419-668-5691<br>Peter J. Mesenburg, pres. | Mesenburg Bros., Inc. (86)<br>Mesenburg Bros., Inc. (20) | Erie<br>Huron | sand & gravel<br>sandstone | 9,282<br>108,777 | 9,282<br>108,777 | Ee-24<br>Hrn-8 | IM-915<br>IM-268 |
| Miami River Stone Co.<br>1556 Miami River Rd.<br>Sidney, OH 45365<br>513-492-5412<br>Bradley Comer, gen. mgr. | Miami River Stone Co. (110)<br>Miami River Stone Co. (311) | Shelby<br>Shelby | limestone<br>sand & gravel | 488,628<br>[53] | 418,455 | Shy-6<br>Shy-17 | IM-389<br>IM-389 |
| Mickley Gravel Co.<br>P.O. Box J<br>Danville, OH 43014<br>614-599-7870<br>Paul A. Mickley, owner | Mickley Gravel Co. (162) | Knox | sand & gravel | 4,596 | 0 | Kx-5 | IM-884 |
| Middletown Sand & Gravel Co.<br>2100 S. Main St.<br>P.O. Box 368<br>Middletown, OH 45042<br>513-422-3781<br>David Morgan, pres. | Middletown Sand & Gravel Co. (40) | Butler | sand & gravel | 111,928 | 111,928 | Br-1 | IM-180 |
| Miller Bros. Clay Works, Inc.<br>Lock Box 162<br>Ottoville, OH 45876<br>419-453-3545<br>Kenneth A. Miller, pres. | Miller Bros. Clay Works, Inc. (48) | Putnam | clay | 1,200 | 1,200 | Pm-9 | |
| Miller Bros. Gravel, Inc.<br>7900 S. Kessler-Frederick Rd.<br>Tipp City, OH 45371<br>513-698-7204<br>Thomas O. Miller, pres. | Miller Bros. Gravel, Inc. (233) | Montgomery | sand & gravel | 181,571 | 178,951 | My-52 | IM-348 |
| H. M. Miller Construction Co.<br>1225 Waterloo Rd.<br>Mogadore, OH 44260<br>216-628-4811<br>J. C. Smith, pres. | Krumroy Pit (330) | Summit | sand & gravel | 8,627 | 8,627 | St-46 | IM-557 |
| Miller Sand & Gravel Co.<br>State Rte. 82 Box 60<br>Windham, OH 44288<br>216-326-3157<br>Donald M. Miller, owner | Miller Sand & Gravel Co. (272) | Portage | sand & gravel | 6,297 | 6,297 | Pe-39 | IM-174 |
| Miller Sand Co.<br>5003 Bellevue-Castalia Rd.<br>Castalia, OH 44824<br>419-684-7328<br>Todd C. Miller, owner | Miller Sand Co. (87) | Erie | sand & gravel | 6,100 | 6,100 | Ee-28 | IM-601 |
| Mohican Organic Products, Inc.<br>Rte. 1, 47 Milligan Rd.<br>Lucas, OH 44843<br>419-892-2212<br>Farley & Joyce Amos, owners | Mohican Pit (1) | Ashland | peat | 573 | 2,063 | Ald-13 | |
| Mohican Sand & Gravel, Inc.<br>P.O. Box 28<br>Perrysville, OH 44864<br>419-522-2521<br>Richard R. Stander, Sr., pres. | Mohican Sand & Gravel, Inc. (292) | Richland | sand & gravel | 20,304 | 20,304 | Rd-5 | IM-674 |
| Moore's Excavating Co.<br>2222 N. State Rte. 68<br>Urbana, OH 43078<br>513-653-6288<br>Ralph Moore, owner | Moore's Excavating Co. (51) | Champaign | sand & gravel | 111,866 | 111,866 | Cpn-20 | IM-482 |

[53]No sales or production.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Morton Thiokol, Inc.<br>Morton Salt Division<br>P.O. Box 428<br>Grand River, OH 44045-0428<br>216-354-9901<br>John J. Harkins, mgr. | Fairport Mine (2) | Lake | salt | 993,659 | 1,042,896 | Lke-6 | |
| Morton Thiokol, Inc.<br>Morton Salt Division<br>151 S. Industrial St.<br>Rittman, OH 44270-1593<br>216-925-3015<br>Charles S. Locke, CEO | Morton Salt Well Field (5) | Wayne | salt | 454,905 | 477,993 | We-9129 | |
| Muskingum River Gravel Co.<br>P.O. Box 671<br>Zanesville, OH 43701<br>614-453-0721<br>Larry E. Young, v. pres. | Plant #6 (101) | Franklin | sand & gravel | [54] | | Fn-24 | IM-266 |
| | Muskingum River Gravel Co. (247) | Muskingum | sand & gravel | [54] | | Mum-228 | IM-421 |
| | Plant #1 (245) | Muskingum | sand & gravel | [54] | | Mum-736 | IM-804 |
| | Plant #2 (367) | Washington | sand & gravel | [54] | | Wn-38 | IM-701 |
| National Lime & Stone Co.<br>P.O. Box 120<br>Findlay, OH 45839-0120<br>419-422-4341<br>R. W. Kruse, v. pres. | Lima Plant (4) | Allen | limestone | [55] | | An-2 | IM-540 |
| | Lima Plant (5) | Allen | limestone | 918,883 | 842,014 | An-3 | IM-484 |
| | Lima Plant (6) | Allen | limestone | [55] | | An-11 | IM-541 |
| | Buckland Plant (11) | Auglaize | limestone | 275,784 | 230,413 | Ae-10 | IM-486 |
| | Wapakoneta Plant (24) | Auglaize | sand & gravel | 269,724 | 297,756 | Ae-30 | IM-598 |
| | Bucyrus Plant (18) | Crawford | limestone | 1,300,931 | 1,238,599 | Cd-1 | IM-404 |
| | Delaware Plant (21) | Delaware | limestone | 1,480,989 | 1,416,993 | Del-5 | IM-207 |
| | Findlay Plant (35) | Hancock | limestone | 551,130 | 633,505 | Hk-1 | IM-483 |
| | Marion Plant (60) | Marion | limestone | 748,004 | 972,816 | Mn-3 | IM-168 |
| | Carey Plant (134) | Wyandot | limestone | 2,491,406 | 1,979,201 | Wt-1 | IM-405 |
| | National Lime & Stone Co. (380) | Wyandot | sand & gravel | [54] | | Wt-5[56] | IM-376 |
| | National Lime & Stone Co. (380) | Wyandot | sand & gravel | [54] | | Wt-15[56] | IM-376 |
| | National Lime & Stone Co. (381) | Wyandot | sand & gravel | [54] | | Wt-18[56] | IM-551 |
| Neer's Sand & Gravel<br>4859 Twp. Rd. 45<br>Bellefontaine, OH 43311<br>513-585-6733<br>Arden J. Neer, Sr., owner | Neer's Sand & Gravel (189) | Logan | sand & gravel | 189,099 | 175,306 | Lgn-6 | IM-459 |
| Neiheisel Sand & Gravel<br>912 Beeson Mill Rd.<br>Leetonia, OH 44431<br>216-427-2824<br>Thomas L. Neiheisel, Sr., owner | Neiheisel Sand & Gravel (67) | Columbiana | sand & gravel | [57] | | Ca-600 | IM-100 |
| | Neiheisel Sand & Gravel (196) | Mahoning | sand & gravel | 6,968 | 6,968 | Mg-NSG[58] | IM-808 |
| Nelson Sand & Gravel, Inc.<br>P.O. Box 31<br>Kingsville, OH 44048<br>216-224-0198<br>Thomas H. Nelson, pres. | Nelson Sand & Gravel, Inc. (13) | Ashtabula | sand & gravel | 44,500 | 43,000 | Asa-11 | IM-160 |
| | Nelson Sand & Gravel, Inc. (14) | Ashtabula | sand & gravel | [54] | | Asa-12 | IM-911 |
| Newark Asphalt Co.<br>2699 State Rte. 37<br>Alexandria, OH 43001<br>614-366-2302<br>Frank B. Murphy, pres. | Alexandria Pit (173) | Licking | sand & gravel | 61,569 | 64,767 | Lg-8 | IM-271 |
| New Carlisle Sand & Gravel Co.<br>6090 S. Scarff Rd.<br>New Carlisle, OH 45344<br>513-845-0696<br>Elizabeth Upton, owner | New Carlisle Sand & Gravel Co. (217) | Miami | sand & gravel | 154 | 154 | Mi-501 | |
| New Miami Sand & Gravel, Inc.<br>151 Seven Mile Ave.<br>New Miami, OH 45011<br>513-863-7676<br>William C. Schmidter, pres. | New Miami Sand & Gravel, Inc. (42) | Butler | sand & gravel | 38,616 | 25,479 | Br-3 | IM-719 |
| Newton Asphalt<br>P.O. Box 86<br>Strasburg, OH 44680<br>216-878-5648<br>G. A. Gessner & C. T. Newton, partners | 516 (428) | Tuscarawas | sand & gravel | 36,234 | 36,234 | Ts-2001 | IM-1004 |
| Northern Ohio Materials, Inc.<br>8300 State Rte. 14<br>Streetsboro, OH 44241<br>216-626-5577<br>Joseph A. Began, district mgr. | Northern Ohio Materials, Inc. (273) | Portage | sand & gravel | 244,182 | 244,182 | Pe-85 | IM-700 |

[54]No report filed in 1988.
[55]All sales and production are reported under An-3.
[56]This mine was operated 1st through 3rd quarters 1988 by H & M Sand & Gravel Co. and 4th quarter by National Lime & Stone Co.
[57]No sales or production.
[58]No mine number has been assigned by the Division of Mines.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Northmont Sand & Gravel Co.<br>P.O. Box 185<br>Englewood, OH 45322<br>513-836-1998<br>Robert D. Eyre, pres. | Northmont Sand & Gravel Co. (235) | Montgomery | sand & gravel | 117,480 | 117,480 | My-49 | IM-370 |
| North Ridge Materials<br>3052 E. Center St.<br>P.O. Box 599<br>North Kingsville, OH 44068<br>216-224-1009<br>Joseph E. Simak, pres. | North Ridge Materials (393)<br>North Ridge Materials (413) | Ashtabula<br>Ashtabula | sand & gravel<br>sand & gravel | 17,960<br>7,145 | 17,960<br>7,145 | Asa-16<br>Asa-18 | IM-949<br>IM-949 |
| North Shore Stone Quarries, Inc.<br>72 Fernhill Ave.<br>Columbus, OH 43228<br>614-878-3628<br>Clifford Hammond, pres. | North Shore Stone Quarries, Inc. (109) | Seneca | limestone | 8,171 | 8,171 | Sa-8 | IM-313 |
| Northwood Stone & Asphalt Co.<br>1558 County Rd. 105<br>Belle Center, OH 43310<br>513-464-3833<br>Don E. Mill, pres. | Northwood Stone & Asphalt Co. (51) | Logan | limestone | 172,288 | 185,190 | Lgn-2 | IM-494 |
| Nutter Bros. Coal Co., Inc.<br>P.O. Box 248<br>New Straitsville, OH 43766<br>614-394-2681<br>James P. Nutter, pres. | Nutter Bros. Coal Co., Inc. (47) | Perry | clay | 41,944 | 41,944 | Py-259 | IM-80, D-0288 |
| Carl E. Oeder & Sons Sand & Gravel<br>3890 Turtlecreek Rd.<br>Lebanon, OH 45036<br>513-494-1238<br>Carl E. Oeder, pres. | Carl E. Oeder & Sons Sand & Gravel (352)<br>Carl E. Oeder & Sons Mine #2 (431) | Warren<br>Warren | sand & gravel<br>sand & gravel | 364,666<br>21,152 | 364,666<br>21,152 | Wan-41[59]<br>Wan-52 | IM-629<br>IM-994 |
| Ohio Asphaltic Limestone Corp.<br>8591 Mad River Rd.<br>Hillsboro, OH 45133<br>513-364-2191<br>W. C. Mason, pres. | Ohio Asphaltic Limestone Corp. (42) | Highland | limestone | 244,916 | 260,426 | Hd-3 | IM-253 |
| Olen Corp.<br>1709 Amity Rd.<br>Hilliard, OH 43026<br>614-878-8366<br>Toby McKee, pres. | Olen Corp. (102)<br>Olen Corp. (161) | Franklin<br>Knox | sand & gravel<br>sand & gravel | 572,417<br>269,851 | 572,417<br>269,851 | Fn-43<br>Kx-16 | IM-188<br>IM-793 |
| Oneida Sand & Gravel, Inc.<br>8000 Blade Rd. NW<br>Malvern, OH 44644<br>216-343-6831<br>Louis H. Smitley, pres. | Oneida Sand & Gravel, Inc. (47) | Carroll | sand & gravel | 93,603 | 83,357 | Cl-204 | IM-554 |
| Osborne Materials Co.<br>Williams St.<br>P.O. Box 248<br>Grand River, OH 44045-0248<br>216-357-5562<br>Harold T. Larned, pres. | Osborne Materials Co. (2) | Lake Erie | sand & gravel (dredged) | 87,666 | 87,666 | Lke-D[60] | |
| Oster Sand & Gravel, Inc.<br>5947 Whipple Ave. NW<br>North Canton, OH 44720<br>216-494-5472<br>Marlene K. Oster, pres. | Oster Sand & Gravel, Inc. (326)<br>Oster Sand & Gravel, Inc. (342) | Stark<br>Tuscarawas | sand & gravel<br>sand & gravel | 317,935<br>145,942 | 317,935<br>145,942 | Sk-165<br>Ts-1852 | IM-192, IM-781<br>IM-75 |
| Owens Stone Co., Inc.<br>1274 Ostrander Rd.<br>Ostrander, OH 43061<br>614-666-7555<br>Kenneth F. Manning, pres. | Owens Stone Co., Inc. (22) | Delaware | limestone | 262,790 | 203,571 | Del-3 | IM-327 |
| Partin Sand & Gravel<br>4252 Taylorsville Rd.<br>Dayton, OH 45424<br>513-233-9501<br>Arthur C. Partin, owner | Partin Sand & Gravel (236) | Montgomery | sand & gravel | 2,000 | 2,000 | My-55 | IM-571 |
| R. H. Penick Co.<br>1504 Blue Jay Rd.<br>Heath, OH 43056<br>614-323-3040<br>R. H. Penick, owner | R. H. Penick Co. (3) | Licking | salt | 11,706 | 11,706 | Lg-45 | |

[59]See also Dravo Basic Materials Co., Inc.
[60]No mine number has been assigned by the Division of Mines.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Penry Stone Co.<br>P.O. Box 176<br>Radnor, OH 43066<br>614 595-3473<br>Walter M. & David M. Penry & Suzanne P. Meyer, owners | Penry Stone Co. (23)<br>Penry Stone Co. (198) | Delaware<br>Marion | limestone<br>sand & gravel | 353,698<br>70,104 | 353,698<br>60,112 | Del-2<br>Mn-4 | IM-299<br>IM-290 |
| Phillips Sand & Gravel<br>U.S. Rte. 35 Box 187<br>Alpha, OH 45301<br>513-426-5461<br>George E. Phillips, pres. | Phillips Sand & Gravel (115) | Greene | sand & gravel | 563,446 | 563,446 | Ge-36 | IM-305 |
| Pifer Stone Co.<br>P.O. Box 101<br>Williamstown, OH 45897<br>419-365-5078<br>William E. Pifer, owner | Pifer Stone Co. (36) | Hancock | limestone | 3,478 | 0 | Hk-4 | IM-489 |
| C. F. Poeppelman, Inc.<br>4755 N. State Rte. 721<br>Bradford, OH 45308<br>513-448-2191<br>James Poeppelman, pres. | C. F. Poeppelman, Inc. (67) | Miami | limestone | 186,335 | 186,335 | Mi-10 | IM-335 |
| Portage Lakes Sand & Gravel Co.<br>2800 N. Turkeyfoot Rd.<br>Akron, OH 44319<br>216-644-2285<br>James V. Crano, pres. | Portage Lakes Sand & Gravel Co. (384) | Summit | sand & gravel | 256,976 | 256,976 | St-53 | IM-874 |
| Prairie Lane Gravel Co.<br>4401 Prairie Lane Rd.<br>Wooster, OH 44691<br>216-262-6821<br>Ralph W. Miller, Jr., pres. | Prairie Lane Gravel Co. (372) | Wayne | sand & gravel | 149,504 | 149,504 | We-11 | IM-547 |
| Precision Sand & Gravel<br>12205 Gypsy Lane Rd.<br>Bowling Green, OH 43402<br>419-352-4681<br>Randolph G. Schmeltz, pres. | Precision Sand & Gravel (379) | Wyandot | sand & gravel | 61,079 | 61,079 | Wt-4 | IM-520 |
| Price Sand & Gravel<br>Div. of Price Asphalt & Paving Co.<br>115 Jefferson St.<br>Norwalk, OH 44857-1994<br>419-668-1059<br>Robert C. Price, pres. | Price Sand & Gravel (157) | Huron | sand & gravel | 131,360 | 120,549 | Hrn-1 | IM-550 |
| Purdy Sand & Gravel Co.<br>14220 Parrott St. Ext.<br>P.O. Box 667<br>Mt. Vernon, OH 43050<br>614-397-0000<br>J. R. Purdy, pres. | Purdy Sand & Gravel Co. (163) | Knox | sand & gravel | 74,087 | 104,832 | Kx-3 | IM-300 |
| Puskarich Limestone Co.<br>40580 Cadiz-Piedmont Rd.<br>Cadiz, OH 43907<br>614-942-4656<br>Anthony Puskarich, pres. | Puskarich Limestone Co. (15) | Carroll | limestone | 81,083 | 97,389 | Cl-183 | IM-7 |
| Putnam Stone Co.<br>R.R. 1, 7053 Road M<br>Ottawa, OH 45875-9754<br>419-523-6004<br>J. E. Shroyer, pres. | Putnam Stone Co. (98) | Putnam | limestone | 178,296 | 181,356 | Pm-2 | IM-570 |
| Quality Ready Mix, Inc.<br>R.R. 5<br>Wapakoneta, OH 45895<br>419-738-6010<br>Robert E. Hirschfeld, pres. | Quality Ready Mix, Inc. (25) | Auglaize | sand & gravel | 36,293 | 36,293 | Ae-16 | IM-595 |
| R & S, Inc.<br>7522 Wales Rd. NW<br>North Canton, OH 44720<br>216-499-1024<br>Garry R. Ross, pres. | Copley Sand & Gravel (427) | Summit | sand & gravel | 87,194 | 87,194 | St-54 | IM-934 |
| Rack Sand, Inc.<br>5175 Este Ave.<br>Cincinnati, OH 45232<br>513-242-5052<br>Roy Schweitzer, owner | Rack Sand, Inc. (139) | Hamilton | sand & gravel | 105,910 | 105,910 | Hmn-10 | IM-226 |

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Ramsier Sand & Gravel<br>113 Howe St.<br>Lodi, OH 44254<br>216-948-1749<br>Larry L. Ramsier, owner | Ramsier Sand & Gravel (205) | Medina | sand & gravel | [61] | | Ma-12 | IM-516 |
| J. D. Rhodes<br>3784 Sullivant Ave.<br>Columbus, OH 43228<br>614-274-9624<br>John D. Rhodes, pres. | Ag Materials, Inc. (414) | Franklin | sand & gravel | 196,011 | 196,011 | Fn-56[62] | IM-980 |
| Richards & Son, Inc.<br>P.O. Box 232<br>Pomeroy, OH 45769<br>614-247-2311<br>Dennis R. Taylor, mgr. | Richards & Son, Inc. (212) | Meigs | sand & gravel | 589,944 | 589,944 | Ms-298 | IM-32 |
| Ridge Township Quarry<br>R.R. 1 Box 263<br>Van Wert, OH 45891<br>419-238-2533<br>Jenny Lautenschleger, foreman | Ridge Township Quarry (122) | Van Wert | limestone | 55,644 | 45,010 | Vt-7 | IM-642 |
| Ries Sand & Gravel<br>169 State Rte. 95<br>Jeromesville, OH 44840<br>419-368-7833<br>Robert Ries, owner | Ries Sand & Gravel (6) | Ashland | sand & gravel | 6,417 | 6,417 | Ald-9 | IM-745 |
| Riverside Sand & Gravel Co., Inc.<br>P.O. Box 324<br>Tallmadge, OH 44278-0324<br>216-673-2021<br>A. H. Acken, Jr., pres. | Riverside Sand & Gravel Co., Inc. (333) | Summit | sand & gravel | 93,357 | 86,424 | St-24 | IM-239 |
| Gary Roberts Excavating<br>570 Derby Downs Rd.<br>Newark, OH 43055<br>614-763-3206<br>Gary L. Roberts, owner | Gary Roberts Excavating (419) | Licking | sand & gravel | 1,000 | 1,000 | Lg-504 | IM-991 |
| L. G. Rockhold & Sons, Inc.<br>28541 State Rte. 739<br>West Mansfield, OH 43358<br>513-358-2224<br>Howard E. Rockhold, pres. | L. G. Rockhold & Sons, Inc. (119) | Union | limestone | 214,430 | 201,780 | Un-1 | IM-208 |
| Rogers Group, Inc.<br>dba Sandusky Crushed Stone Co.<br>P.O. Box 527<br>Sandusky, OH 44870<br>419-625-8493<br>Richard Rechter, pres. | Sandusky Crushed Stone Co. (25) | Erie | limestone | 2,559,641 | 2,673,540 | Ee-11 | IM-263 |
| Rubber City Sand & Gravel Co.<br>P.O. Box 106<br>Uniontown, OH 44685<br>216-699-3311<br>William H. Leach, Sr., owner | Rubber City Sand & Gravel Co. (334) | Summit | sand & gravel | 58,365 | 56,017 | St-9 | IM-167 |
| Rupp Construction, Inc.<br>18228 Fulton Rd.<br>Marshallville, OH 44645<br>216-855-2781<br>J. P. Radabaugh, pres. | Rupp Construction, Inc. (373) | Wayne | sand & gravel | 297,700 | 297,700 | We-7 | IM-471 |
| S & S Aggregate, Inc.<br>P.O. Box 1585<br>Zanesville, OH 43702-1585<br>614-453-0721<br>Larry E. Young, v. pres. | S & S Aggregate, Inc. (414)<br>S & S Aggregate, Inc. (152)<br>S & S Aggregate, Inc. (63)<br>S & S Aggregate, Inc. (281)<br>S & S Aggregate, Inc. (282)<br>S & S Aggregate, Inc. (337)<br>S & S Aggregate, Inc. (338)<br>S & S Aggregate, Inc. (336) | Franklin<br>Hocking<br>Mercer<br>Portage<br>Portage<br>Summit<br>Summit<br>Summit | sand & gravel<br>sand & gravel<br>limestone<br>sand & gravel<br>sand & gravel<br>sand & gravel<br>sand & gravel<br>sand & gravel | [63]<br>[63]<br>[63]<br>[63]<br>[63]<br>[63]<br>[63]<br>[63] | | Fn-56[62]<br>Hg-301<br>Mr-2<br>Pe-59<br>Pe-67<br>St-29<br>St-32<br>St-44 | IM-980<br>IM-458<br>IM-430<br>IM-210<br>IM-202<br><br><br>IM-178 |
| SME Cement, Inc.<br>8282 Middlebranch Rd.<br>P.O. Box 234<br>Middlebranch, OH 44652<br>216-499-9100<br>Lawrence Ousky, pres. | #3 Pit (115) | Stark | limestone | [61] | | Sk-222 | IM-819 |

[61]No sales or production.
[62]This mine was operated 1st quarter 1988 by J. D. Rhodes and 2nd through 4th quarter by S & S Aggregate, Inc.
[63]No report filed in 1988.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Salt Creek Materials, Inc.<br>880 Spry Rd.<br>Zanesville, OH 43701<br>614-872-3860<br>Charles O. Lighthizer, owner | Salt Creek Materials, Inc. (248)<br>Salt Creek Materials, Inc. (249)<br>Salt Creek Materials, Inc. (144)<br>(425) | Muskingum<br>Muskingum<br>Muskingum | sand & gravel<br>sand & gravel<br>limestone<br>sand & gravel | 0<br>2,806<br>2,240<br>1,097 | 2,622<br>0<br>2,527<br>361 | Mum-216<br>Mum-220<br>Mum-269 | IM-689<br>IM-623<br>IM-1009 |
| Samco, Inc.<br>10217 State Rte. 534 N<br>Middlefield, OH 44062<br>216-272-5158<br>J. Jim Holmes, pres. | Springbrook (340) | Ashtabula, Trumbull | sand & gravel | 403,165 | 403,165 | Tl-12[64] | IM-131 |
| Sandkuhl Tile Co.<br>05536 Kossuth-Amanda Rd.<br>Spencerville, OH 45887<br>419-647-4131<br>Leslie E. Sandkuhl, pres. | Sandkuhl Tile Co. (2) | Auglaize | clay | 4,153 | 4,873 | Ae-7 | |
| Sandman Sand & Stone, Inc.<br>1620 Kieswetter Rd.<br>Holland, OH 43528<br>419-865-1666<br>Robert Parker, pres. | Nebraska Pit (193)<br>Dorr Pit (421)<br>Eber Rd. Pit (422) | Lucas<br>Lucas<br>Lucas | sand & gravel<br>sand & gravel<br>sand & gravel | 242,289<br>56,228<br>7,994 | 242,289<br>56,228<br>7,994 | Ls-20[65]<br>Ls-S[66]<br>Ls-S1[66] | IM-982<br>IM-703<br>IM-1016 |
| Schilling Contractors, Inc.<br>Rte. 2 Box 326<br>Ironton, OH 45638<br>614-532-8463<br>Earl P. Schilling, pres. | Schilling Contractors, Inc. (305) | Scioto | sand & gravel | 283 | 120 | So-78 | |
| Schloss Paving Co.<br>13700 McCracken Rd.<br>Cleveland, OH 44125<br>216-587-4900<br>Raymond E. Schloss, Sr., pres. | Schloss Paving Co. (274) | Portage | sand & gravel | 71,707 | 70,327 | Pe-60 | IM-78 |
| Schrader Sand & Gravel<br>293 Tile Mill Rd.<br>Beaver, OH 45613<br>614-226-1902<br>Melvin Schrader, owner | Schrader Sand & Gravel (45) | Pike | sandstone | 7,843 | 9,755 | Pke-31 | IM-835 |
| Scioto Valley Resources<br>P.O. Box 760<br>Lucasville, OH 45648<br>513-393-4211<br>John B. Patton, pres. | Scioto Valley Resources Division (395) | Scioto | sand & gravel | 364,183 | 250,477 | So-100 | IM-760 |
| Seaway Sand & Stone, Inc.<br>2190 Whitehouse-Spencer Rd.<br>Rte. 4 Box 289<br>Swanton, OH 43558<br>419-865-5751<br>Mack S. Moon, pres. | Seaway Sand & Stone, Inc. (195) | Lucas | sand & gravel | 65,642 | 65,642 | Ls-13 | IM-492 |
| Seville Sand & Gravel, Inc.<br>8215 Seville Rd.<br>Seville, OH 44273<br>216-948-1812<br>George Cross, pres. | Seville Sand & Gravel, Inc. (207)<br>Seville Sand & Gravel, Inc. (206) | Medina<br>Medina | sand & gravel<br>sand & gravel | <br>255,782 | <br>255,782 | Ma-9[68]<br>Ma-22 | IM-424, IM-425<br>IM-650, IM-651 |
| R. W. Sidley, Inc.<br>615 W. Main St.<br>Conneaut, OH 44030<br>216-298-3232<br>Robert C. Sidley, pres. | Kingsville (15) | Ashtabula | sand & gravel | 69,500 | 141,088 | Asa-15 | IM-783 |
| R. W. Sidley, Inc.<br>7123 Madison Rd.<br>Thompson, OH 44086<br>216-298-3232<br>Robert C. Sidley, pres. | Thompson Pit (18)<br>Painesville Pit (166) | Geauga<br>Lake | sandstone<br>sand & gravel | 121,000<br>56,000 | 220,270<br>74,056 | Gea-1<br>Lke-7 | IM-163<br>IM-162 |
| Sidney Sand & Gravel Co.<br>P.O. Box 379<br>Sidney, OH 45365<br>513-492-3125<br>Patrick H. Milligan, pres. | Milligan & Milligan-Washington Twp. Pit (312)<br>Rock Run Quarry (111) | Shelby<br>Shelby | sand & gravel<br>limestone | 169,493<br>87,341 | 169,493<br>87,341 | Shy-13<br>Shy-16 | IM-412<br>IM-411 |
| Sidwell Bros., Inc.<br>4620 Limestone Valley Rd.<br>Zanesville, OH 43701<br>614-849-2392<br>Dale R. Sidwell, pres. | Sidwell Quarry (78) | Muskingum | limestone | 508,557 | 508,357 | Mum-104 | IM-277 |

[64]All sales and production are from Trumbull County.
[65]This mine was operated 1st quarter 1988 by Maumee Haulers, Inc. and 2nd through 4th quarters by Sandman Sand & Stone, Inc.
[66]No mine number has been assigned by the Division of Mines.
Footnote 67 has been dropped.
[68]All sales and production are reported under Ma-22.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Silchuk Gravel Co.<br>2470 Wall Rd.<br>Rittman, OH 44270<br>216-336-8796<br>Junior F. Silchuk, owner | Silchuk Gravel Co. (208) | Medina | sand & gravel | [69] | | Ma-16 | |
| Joe Simak & Sons Trucking, Inc.<br>3052 E. Center St.<br>P.O. Box 599<br>North Kingsville, OH 44068<br>216-224-1992<br>Joseph E. Simak, pres. | Penn Line Pit (394) | Ashtabula | sand & gravel | 1,606 | 1,606 | Asa-S[70] | IM-853 |
| Small's Sand & Gravel, Inc.<br>P.O. Box 617<br>Gambier, OH 43022<br>614-427-4096<br>William Small, pres. | Small's Sand & Gravel, Inc. (164)<br>Small's Sand & Gravel, Inc. (165)<br>Small's Sand & Gravel, Inc. (408) | Knox<br>Knox<br>Knox | sand & gravel<br>sand & gravel<br>sand & gravel | 18,450<br>270,489<br>0 | 0<br>0<br>270,489 | Kx-8<br>Kx-15<br>Kx-17 | IM-267<br>IM-967<br>IM-968 |
| Sober Sand & Gravel Co.<br>2898 Tallmadge Rd.<br>Ravenna, OH 44266<br>216-325-7013<br>Waldo A. Sober, pres. | Sober Sand & Gravel Co. (275) | Portage | sand & gravel | 460 | 200 | Pe-18 | IM-193 |
| Soehnlen Bros. Sand & Gravel Co.<br>Rte. 1<br>Beach City, OH 44608<br>216-756-2244<br>Francis L. & Nicholas S. Soehnlen, partners | Soehnlen Bros. Sand & Gravel Co. (343) | Tuscarawas | sand & gravel | 57,259 | 80,000 | Ts-1826 | IM-88 |
| Solon Excavators Sand & Gravel, Inc.<br>10925 Mantua Center Rd.<br>P.O. Box Q<br>Mantua, OH 44255<br>216-274-8241<br>Howard Sargent, pres. | Solon Excavators Sand & Gravel, Inc. (276) | Portage | sand & gravel | 323,233 | 323,233 | Pe-36 | IM-90 |
| Soltis Sand & Gravel<br>19102 Nelson Ledge Rd.<br>Garrettsville, OH 44231<br>216-548-5813<br>James W. Soltis, owner | Soltis Sand & Gravel (415) | Geauga | sand & gravel | 4,525 | 4,525 | Gea-9 | IM-132 |
| Southern Ohio Aggregates<br>11641 Mosteller Rd.<br>Cincinnati, OH 43113<br>513-771-0820<br>John C. Jurgensen, pres. | Southern Ohio Aggregates (284) | Preble | sand & gravel | [71] | | Pre-7 | IM-306 |
| Southern Silica, Inc.<br>P.O. Box 22<br>Richmond Dale, OH 45673<br>614-884-4721<br>George W. Cannon, Jr., pres. | Southern Silica, Inc. (34) | Ross | sandstone | 217,878 | 217,878 | Rs-16 | IM-172 |
| Southwestern Portland Cement Co.<br>Eastern Division<br>506 E. Xenia Rd.<br>P.O. Box 191<br>Fairborn, OH 45324<br>513-878-8651<br>Craig Leibsle, pres. | Southwestern Portland Cement Co. (33)<br>Southwestern Portland Cement Co. (10)<br>Southwestern Portland Cement Co. (34)<br>Southwestern Portland Cement Co. (72) | Clark, Greene<br>Greene<br>Greene<br>Montgomery | limestone<br>clay<br>limestone<br>limestone | 783,183<br>124,516<br>[69]<br>488,784 | 783,183<br>124,516<br><br>488,784 | Ge-1[72]<br>Ge-8<br>Ge-9<br>My-58 | IM-393<br>IM-364<br>IM-364<br>IM-330 |
| Sphagnum Moss Peat Farm<br>9797 Thompson Rd.<br>West Liberty, OH 43357<br>513-653-7337<br>Herman S. Thompson, owner | Sphagnum Moss Peat Farm (2) | Champaign | peat | 21,836 | 29,040 | Cpn-9 | |
| Spring Creek Corp.<br>4723 Hardin-Wapak Rd.<br>Sidney, OH 45365<br>513-492-9697<br>Nelson E. Barhorst, pres. | Pence Deposit (314)<br>River Quarry (112)<br>Jones Deposit (315) | Shelby<br>Shelby<br>Shelby | sand & gravel<br>limestone<br>sand & gravel | 100,200<br>133,516<br>327,600 | 100,200<br>133,516<br>327,600 | Shy-11<br>Shy-15<br>Shy-18 | IM-743<br>IM-387<br>IM-388 |
| Spring Industries, Inc.<br>P.O. Box 507<br>New Philadelphia, OH 44663<br>216-339-3585<br>Glenn Straub, pres. | Newcomerstown Plant (72)<br>Midvale Pit (344)<br>County Line Plant (345) | Coshocton<br>Tuscarawas<br>Tuscarawas | sand & gravel<br>sand & gravel<br>sand & gravel | 24,359<br>384,306<br>11,376 | 0<br>533,000<br>95,500 | Cn-624<br>Ts-1771<br>Ts-1788 | IM-243<br>IM-77<br>IM-73 |

[69]No sales or production.
[70]No mine number has been assigned by the Division of Mines.
[71]No report filed in 1988.
[72]All sales and production are from Greene County.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Spring Run Farm & Gravel<br>11070 Township Rd. 71<br>Killbuck, OH 44637<br>216-276-8763<br>Gene Boughman, owner | Spring Run Farm & Gravel (416) | Holmes | sand & gravel | 7,137 | 7,252 | Hs-96 | IM-997 |
| Spring Valley Investments, Inc.<br>2800 N. Turkeyfoot Rd.<br>Akron, OH 44319<br>216-644-2285<br>James V. Crano, pres. | Spring Valley Investments, Inc. (335) | Summit | sand & gravel | [73] | | St-26 | IM-803 |
| Springfield Sand & Gravel Co.<br>4301 S. Charleston Pike<br>Springfield, OH 45502<br>513-325-7386<br>Don E. Mill, pres. | Springfield Sand & Gravel Co. (58) | Clark | sand & gravel | 452,420 | 420,650 | Ck-25 | IM-358 |
| Standard Slag Co.<br>1200 Stambaugh Bldg.<br>P.O. Box 1378<br>Youngstown, OH 44501<br>216-743-3151<br>R. T. Beeghly, pres. | Adams (2) | Adams | limestone | 226,581 | 223,316 | Ads-6 | IM-659 |
| | Marblehead (84) | Ottawa | limestone | 1,313,095 | 1,325,570 | Oa-7 | IM-440 |
| | Cutlip (255) | Pike | sand & gravel | 238,218 | 228,059 | Pke-24 | IM-222 |
| | Shalersville (277) | Portage | sand & gravel | 906,297 | 911,131 | Pe-68 | IM-143, IM-687 |
| | Shalersville Portable (278) | Portage | sand & gravel | [73] | | Pe-SS1[74] | IM-660 |
| | Haverhill (306) | Scioto | sand & gravel | 302,707 | 333,723 | So-79 | IM-221 |
| Steetley Resources, Inc.<br>Ohio Lime Co.<br>128 E. Main St.<br>Woodville, OH 43469<br>419-849-2321<br>Ian McGregor, pres. | Millersville (103) | Sandusky | limestone | [75] | | Sy-4 | IM-381 |
| | Woodville (104) | Sandusky | limestone | 990,377 | 644,110 | Sy-8 | IM-282 |
| Stewart & Reichman, Inc.<br>Rte. 1<br>P.O. Box 64<br>Gnadenhutten, OH 44629<br>614-922-0050<br>Donald P. Brown, pres. | Stewart & Reichman, Inc. (346) | Tuscarawas | sand & gravel | 37,476 | 37,476 | Ts-111 | IM-55 |
| Stocker Sand & Gravel Co.<br>P.O. Box 176<br>Gnadenhutten, OH 44629<br>614-254-4635<br>William E. Stocker, pres. | Stocker Sand & Gravel Co. (347) | Tuscarawas | sand & gravel | 515,373 | 515,373 | Ts-69 | IM-51 |
| | Stocker Sand & Gravel Co. (348) | Tuscarawas | sand & gravel | 242,424 | 242,424 | Ts-125 | IM-50 |
| Stoneco<br>221 Allen St.<br>P.O. Box 29A<br>Maumee, OH 43537<br>419-893-8731<br>J. T. Kirkby, pres. | Maumee Quarry (54) | Lucas | limestone | 567,487 | 602,506 | Ls-2 | IM-503 |
| | Celina Quarry (62) | Mercer | limestone | 172,059 | 165,332 | Mr-1[76] | IM-592 |
| | Rocky Ridge (83) | Ottawa | limestone | 124,797 | 174,197 | Oa-14 | IM-320 |
| | Auglaize Quarry (88) | Paulding | limestone | 242,889 | 237,332 | Pg-2 | IM-481 |
| | Scott Quarry (121) | Van Wert | limestone | 179,788 | 199,006 | Vt-3 | IM-495 |
| | South Montpelier (375) | Williams | sand & gravel | 175,268 | 156,950 | Ws-6 | IM-497 |
| | North Montpelier (376) | Williams | sand & gravel | [73] | | Ws-9 | IM-498 |
| | Lime City Quarry (131) | Wood | limestone | 387,025 | 363,592 | Wd-6 | IM-480 |
| | Portage Quarry (132) | Wood | limestone | 150,150 | 64,818 | Wd-11 | IM-475 |
| Stone Creek Brick Co.<br>P.O. Box 116<br>Stone Creek, OH 43840<br>216-339-5511<br>A. C. Marsh, Jr., pres. | Stone Creek Clay Mine (67) | Tuscarawas | clay | 63,075 | 63,075 | Ts-1557 | IM-52 |
| | Stone Creek Shale Pit (67) | Tuscarawas | shale | 7,795 | 7,795 | Ts-1558 | IM-52 |
| Suever Stone Co., Inc.<br>State Rte. 697<br>P.O. Box 338<br>Delphos, OH 45833<br>419-692-0931<br>Carl Suever, pres. | Suever Stone Co., Inc. (7) | Allen | limestone | 84,680 | 78,480 | An-4 | IM-491 |
| | Delphos Quarry (123) | Van Wert | limestone | 152,932 | 152,506 | Vt-1 | IM-500 |
| Sugarcreek Clay & Limestone, Inc.<br>P.O. Box 402<br>Sugarcreek, OH 44681<br>216-852-4440<br>Daniel O. Miller, pres. | Sugarcreek Clay & Limestone, Inc. (118) | Tuscarawas | limestone | 64,709 | 68,930 | Ts-1928 | IM-98 |
| | Sugarcreek Clay & Limestone, Inc. (69) | | clay | [73] | | | |
| | (69) | | shale | [73] | | | |
| Summitville Tiles, Inc.<br>Summitville, OH 43962<br>216-223-1511<br>Peter C. Johnson, pres. | Summitville Tiles, Inc. (5) | Columbiana | shale | 57,625 | 57,625 | Ca-205 | IM-74 |
| Tarbox-McCall Stone Co.<br>Div. of Hancock Ready Mix, Inc.<br>852 Western Ave.<br>Findlay, OH 45840<br>419-422-1912<br>Kenneth R. Pfirsch, pres. | Tarbox-McCall Stone Co. (37) | Hancock | limestone | 255,576 | 243,161 | Hk-2 | IM-439 |

[73]No sales or production.
[74]No mine number has been assigned by the Division of Mines.
[75]All sales and production are reported under Sy-8.
[76]This mine was operated January through May 1988 by John W. Karch Stone Co. and June through December by Stoneco.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Taylor Stone Co., Inc.<br>P.O. Box 186<br>McDermott, OH 45652<br>614-259-2361<br>William E. McKinney, pres. | Taylor Quarry (35) | Scioto | sandstone | [77] | | So-47 | IM-251 |
| Teague Gravel Co., Inc.<br>10924 Kinsman Rd.<br>Newbury, OH 44065<br>216-564-5671<br>Donald Teague, pres. | Teague Gravel Pit (109) | Geauga | sand & gravel | 81,397 | 75,040 | Gea-35 | IM-321 |
| Terra Vista Sand & Gravel Co.<br>23850 Commerce Park<br>Cleveland, OH 44122<br>216-464-0903<br>Adrian DeFranco, v. pres. | Terra Vista Sand & Gravel Co. (280) | Portage | sand & gravel | [78] | | Pe-64 | IM-229 |
| Thompson Bros. Mining Co.<br>3379 E. Garfield Rd.<br>P.O. Box 57<br>New Springfield, OH 44443<br>216-549-3979<br>J. E. Thompson, owner | Thompson Bros. Mining Co. (35) | Mahoning | clay | [77] | | Mg-588 | D-0374 |
| Three Locks Construction Co.<br>11 E. Second St.<br>P.O. Box 88<br>Chillicothe, OH 45601<br>614-773-3100<br>Franklin B. Conaway, pres. | N-3 (293) | Ross | sand & gravel | 9,948 | 37,858 | Rs-19 | IM-620 |
| Three Rivers Sand & Gravel, Inc.<br>400 Cooper Ave.<br>Cleves, OH 45002<br>513-941-5040<br>Richard W. Richter, pres. | Three Rivers Sand & Gravel, Inc. (141) | Hamilton | sand & gravel | 23,140 | 0 | Hmn-28 | IM-353 |
| Tipp Stone, Inc.<br>P.O. Box 367<br>Troy, OH 45373<br>513-890-4051<br>T. L. Eidemiller, pres. | Tipp Stone, Inc. (238) | Montgomery | sand & gravel | [78] | | My-61 | IM-468 |
| Towne Square Products<br>156 E. Broadway<br>Westerville, OH 43081<br>614-882-6990<br>Suzanne Stilson Edgar, pres. | Towne Square Products (41) | Noble | shale | 1,824 | 1,824 | Ne-66 | IM-664 |
| Tri-County Limestone Co.<br>4664 Hardin-Marion Rd. N<br>Kenton, OH 43326<br>419-675-7127<br>Norman Cochran, pres. | Tri-County Limestone Co. (61) | Marion | limestone | 151,022 | 151,022 | Mn-1 | IM-250 |
| Tri-State Asphalt Productions<br>44 Sixteenth St.<br>Wheeling, WV 26003<br>304-233-1110<br>Glenn Straub, pres. | Tri-State Asphalt Productions (26) | Belmont | sand & gravel | 746,659 | 869,738 | Bt-74 | IM-288 |
| Trojan Asphalt, Inc.<br>727 E. Ash St.<br>Piqua, OH 45356<br>513-335-8311<br>Lloyd B. Fry, pres. | Trojan Asphalt, Inc. (390) | Miami | sand & gravel | [78] | | Mi-T[79] | IM-696 |
| Trout Sand & Gravel Co.<br>Rte. 4<br>Marietta, OH 45750<br>614-373-7471<br>Henry C. Trout, Jr., owner | Trout Sand & Gravel Co. (369) | Washington | sand & gravel | 37,858 | 37,858 | Wn-510 | IM-25 |
| Troy Gravel Co.<br>135 E. Main St.<br>P.O. Box 440<br>Tipp City, OH 45371<br>513-667-4431<br>James Ernst, pres. | Troy Gravel Co. (219) | Miami | sand & gravel | 454,108 | 405,100 | Mi-3[80] | IM-462 |

[77]No sales or production.
[78]No report filed in 1988.
[79]No mine number has been assigned by the Division of Mines.
[80]This mine was operated 1st through 3rd quarters 1988 by Troy Gravel Co. and 4th quarter by American Aggregates Corp.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| U.S. Cement, Inc.<br>P.O. Box 5250<br>Poland, OH 44514<br>216-499-9100<br>Lawrence Ousky, pres. | Quarry #8 (57)<br>(34) | Mahoning | limestone<br>shale | 888,467<br>105,878 | 1,561,426<br>105,878 | Mg-608 | IM-4 |
| U.S. Gypsum Co.<br>21880 W. State Rte. 163<br>Genoa, OH 43430-0158<br>419-855-8336<br>Paul F. Gnepper, supt. | U.S. Gypsum Co. (85) | Ottawa | limestone | 386,966 | 392,082 | Oa-1 | IM-292 |
| U.S. Silica Co.<br>P.O. Box 100<br>Rockwood, MI 48173<br>313-379-9672<br>Richard E. Goodell, pres. | Coxey Works (42) | Tuscarawas | sandstone | 38,529 | 38,529 | Ts-1660 | IM-68 |
| Union Aggregates Co.<br>8328 Watkins Rd.<br>P.O. Box 178<br>Ostrander, OH 43061<br>614-666-2013<br>Don Mill, pres. | Prospect Sand & Gravel Plant (200)<br>Green Camp Gravel Plant (201)<br>Union Limestone Plant (120) | Marion<br>Marion<br>Union | sand & gravel<br>sand & gravel<br>limestone | 71,673<br>[81]<br>610,205 | 71,673<br><br>610,205 | Mn-10<br>Mn-12<br>Un-2 | IM-196<br>IM-197<br>IM-236 |
| Union Slag Corp.<br>Rte. 4<br>Marietta, OH 45750<br>614-373-5436<br>Josephine Hune, owner | Plant #3 (370)<br>Plant #2 (371) | Washington<br>Washington | sand & gravel<br>sand & gravel | 39,574<br>48,502 | 44,170<br>44,938 | Wn-43<br>Wn-44 | IM-61<br>IM-63 |
| V. I. P. Contractors, Inc.<br>3152 C1 Lighthouse Dr.<br>Fairfield, OH 45014<br>513-874-8704<br>James E. Broshear, pres. | V. I. P. Contractors, Inc. (28) | Butler | sand & gravel | 3,449 | 0 | Br-36[82] | IM-649 |
| Valley Gravel Co.<br>135 E. Main St.<br>P.O. Box 440<br>Tipp City, OH 45371<br>513-667-4431<br>James Ernst, pres. | Valley Gravel Co. (220) | Miami | sand & gravel | 173,489 | 172,400 | Mi-8[83] | IM-355 |
| Valley Materials Co.<br>4947 U.S. Rte. 23 South<br>P.O. Box 400<br>Piketon, OH 45661<br>614-289-4400<br>Ralph McFann, pres. | Valley Materials Co. (252) | Pike | sand & gravel | [84] | | Pke-26 | IM-142 |
| Van Wey Sand & Gravel, Inc.<br>6824 Mt. Vernon Rd. NE Rte. 2<br>Newark, OH 43055<br>614-745-5965<br>Richard L. Van Wey, pres. | Van Wey Sand & Gravel, Inc. (179) | Licking | sand & gravel | 279,539 | 283,261 | Lg-10 | IM-217 |
| Wagner Quarries Co.<br>4203 Milan Rd.<br>Sandusky, OH 44870<br>419-625-8141<br>Stephen C. Lochner, pres. | Wagner Quarries Co. (26) | Erie | limestone | 1,547,175 | 1,453,341 | Ee-1 | IM-310 |
| Waller Bros. Stone Co.<br>P.O. Box 157<br>McDermott, OH 45652<br>614-259-2356<br>L. M. Shope, v. pres. | Inskeep Quarry (36)<br>Crabtree Quarry (37)<br>Miller Quarry (38) | Scioto<br>Scioto<br>Scioto | sandstone<br>sandstone<br>sandstone | 9,040<br>14,624<br>[81] | 9,040<br>14,624 | So-48<br>So-76<br>So-82 | IM-140<br>IM-141<br>IM-158 |
| Walter's Gravel<br>11302 National Rd. SE<br>Thornville, OH 43076<br>614-323-0783<br>Viva W. Fenice, owner | Walter's Gravel (180) | Licking | sand & gravel | [81] | | Lg-15 | |
| Ward Materials, Inc.<br>Rte. 2 385 Oak St.<br>Leipsic, OH 45856<br>419-943-2450<br>Arnold W. Rosebrock, pres. | Ward Materials, Inc. (2) | Allen | sand & gravel | 25,525 | 27,667 | An-15 | IM-721 |

[81]No sales or production.
[82]This mine was operated 1st through 3rd quarters 1988 by Aggregate Services, Inc. and 4th quarter by V. I. P. Contractors, Inc.
[83]This mine was operated 1st through 3rd quarters 1988 by Valley Gravel Co. and 4th quarter by American Aggregates Corp.
[84]No report filed in 1988.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Waterloo Coal Co., Inc.<br>P.O. Box 177<br>Oak Hill, OH 45656<br>614-286-3988<br>Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners | Zoar (47)<br>(23) | Jackson | limestone<br>clay | 174,038<br>19,967 | 174,038<br>19,967 | Jkn-367 | IM-774, D-0273, D-0286, D-0594 |
| Watson Gravel, Inc.<br>2728 Hamilton-Cleves Rd.<br>P.O. Box 277<br>Ross, OH 45061<br>513-863-0070<br>Ronald E. Watson, pres. | Watson Pit (44)<br>Harrison Pit (142)<br>Mason Pit (363) | Butler<br>Hamilton<br>Warren | sand & gravel<br>sand & gravel<br>sand & gravel | 594,221<br>546,254<br>197,455 | 594,221<br>546,254<br>197,455 | Br-47<br>Hmn-60<br>Wan-10 | IM-111<br>IM-761<br>IM-465 |
| Weaver's Peat Co.<br>c/o Weaver's Lawn & Garden Products, Inc.<br>P.O. Box 333<br>Bowling Green, OH 43402-0333<br>419-352-8429<br>Alan Weaver, v. pres. | Weaver's Peat Co. (3) | Logan | peat | [85] | | Lgn-33 | |
| Weber Sand & Gravel, Inc.<br>Rte. 2 Box 3<br>Byran, OH 43506<br>419-636-7920<br>Thomas G. Weber, pres. | Weber Sand & Gravel, Inc. (377) | Defiance, Williams | sand & gravel | 228,606 | 228,606 | Ws-11[86] | IM-509, IM-661 |
| Weidle Sand & Gravel, Inc.<br>P.O. Box 247<br>Germantown, OH 45327<br>513-855-2228<br>Ronal L. Weidle, Sr., pres. | Weidle Sand & Gravel, Inc. (41)<br>Weidle Sand & Gravel, Inc. (239) | Butler<br>Montgomery | sand & gravel<br>sand & gravel | 111,777<br>174,963 | 111,777<br>174,963 | Br-6<br>My-41 | IM-177<br>IM-360 |
| Welch Sand & Gravel, Inc.<br>10217 Columbia St.<br>Harrison, OH 45030-9751<br>513-353-3220<br>Charles H. Welch, pres. | Schlichter Pit (45)<br>Fernald Pit (143)<br>East Miami Pit (144) | Butler<br>Hamilton<br>Hamilton | sand & gravel<br>sand & gravel<br>sand & gravel | 194,088<br>[85]<br>561,710 | 194,088<br><br>561,710 | Br-38<br>Hmn-42<br>Hmn-48 | IM-218<br>IM-823<br>IM-220 |
| White Bros. Sand, Inc.<br>1845 Collingwood Blvd.<br>P.O. Box 714<br>Toledo, OH 43695<br>419-243-2121<br>Ralph K. Kuhlman, pres. | White Bros. Sand, Inc. (3) | Maumee Bay, Maumee River | sand & gravel (dredged) | 116,118 | 116,118 | Ls-D[87] | |
| Whitewater Aggregates, Inc.<br>10431 Campbell Rd.<br>Harrison, OH 45030<br>513-761-7800<br>Elster Varney, Jr., v. pres., operations | Whitewater Aggregates, Inc. (407) | Hamilton | sand & gravel | 720,181 | 708,502 | Hmn-69 | IM-969 |
| Dennis Winzeler<br>Center St. Rte. 4 Box 4<br>Bryan, OH 43506<br>419-636-4285<br>Dennis & Polly Winzeler, owners | Dennis Winzeler (378) | Williams | sand & gravel | [85] | | Ws-14 | IM-614 |
| Wise Gravel<br>8535 W. Klinger Rd.<br>Covington, OH 45318<br>513-473-3246<br>John A. Wise, owner | Wise Gravel (221) | Miami | sand & gravel | 11,762 | 11,762 | Mi-9 | IM-408 |
| Wright Sand<br>3632 S. State Rte. 231<br>Tiffin, OH 44883<br>419-447-5346<br>Paul J. Wright, owner | Wright Sand (307) | Seneca | sand & gravel | 12,977 | 0 | Sa-11 | IM-561 |
| Wyandot Dolomite, Inc.<br>P.O. Box 126<br>Carey, OH 43316-0126<br>419-396-7641<br>Harold P. Wolfe, pres. | Wyandot Dolomite, Inc. (135) | Wyandot | limestone | 987,991 | 1,177,694 | Wt-8 | IM-273 |
| Wysong Gravel Co.<br>5040 Wolfe Creek Pike<br>P.O. Box 5<br>Dayton, OH 45426-0005<br>513-962-2559<br>Gerald E. Wysong, pres. | Camden Plant (285)<br>West Alexandria Plant (286) | Preble<br>Preble | sand & gravel<br>sand & gravel | 100,408<br>114,622 | 100,408<br>114,622 | Pre-4<br>Pre-6 | IM-477<br>IM-478 |

[85]No sales or production.
[86]All sales and production are from Williams County.
[87]No mine number has been assigned by the Division of Mines.

## 1988 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

| Name, address, telephone number, and president/owner/manager of company | Name of mine (and map location number) | County | Commodity | 1988 sales (tons) | 1988 production (tons) | State mine number | Division of Reclamation permit number |
|---|---|---|---|---|---|---|---|
| Wysong Stone Co.<br>5897 State Rte. 503 N<br>Lewisburg, OH 45338<br>513-962-2559<br>Gerald E. Wysong, pres. | Wysong Stone Co. (95) | Preble | limestone | 40,515 | 40,515 | Pre-5 | IM-447 |
| X L Sand & Gravel<br>P.O. Box 157<br>Negley, OH 44441<br>216-426-9876<br>Robert Lansberry, pres. | X L Sand & Gravel (68) | Columbiana | sand & gravel | [88] | | Ca-881 | IM-611 |
| Xenia Sand, Gravel, & Asphalt Co.<br>Dayton-Xenia Rd.<br>P.O. Box 10<br>Xenia, OH 45385<br>513-372-2736<br>John D. Burnett, owner | Xenia Sand, Gravel, & Asphalt Co. (117) | Greene | sand & gravel | 15,506 | 13,256 | Ge-10 | IM-518 |
| York Road Gravel Co.<br>8819 York Rd. SW<br>Pataskala, OH 43062<br>614-927-1524<br>Jack & Jean Klima, owners | York Road Gravel Co. (181) | Licking | sand & gravel | 59,001 | 55,408 | Lg-38 | IM-695 |
| William H. Young<br>6961 Springfield-Xenia Rd.<br>Yellow Springs, OH 45387<br>513-325-9571<br>William & Rita Young, partners | William H. Young (385) | Clark | sand & gravel | [88] | | Ck-501 | IM-340 |
| Young's Sand & Gravel Co.<br>689 State Rte. 39 W<br>P.O. Box 117<br>Loudonville, OH 44842<br>419-994-3040<br>Milton, Marion, & Delmar Young, partners | Young's Sand & Gravel Co. (8)<br>Young's Sand & Gravel Co. (412) | Ashland<br>Ashland | sand & gravel<br>sand & gravel | 104,111<br>118,312 | 105,527<br>121,913 | Ald-7<br>Ald-15 | IM-392<br>IM-944 |
| Zoar Mining Co.<br>P.O. Box 550<br>Zoar, OH 44697<br>216-874-2434<br>Peter C. Johnson, pres. | Zoar Mining Co. (70)<br>(70)<br>Zoar Mining Co. (71)<br>(71) | Tuscarawas<br><br>Tuscarawas<br> | clay<br>shale<br>clay<br>shale | 3,866<br>3,116<br>18,628<br>6,384 | 3,866<br>3,116<br>18,628<br>6,384 | Ts-538<br><br>Ts-540<br> | IM-27<br><br>IM-28<br> |
| Zollinger Sand & Gravel Co.<br>11899 Easton Rd.<br>Rittman, OH 44270<br>216-855-2464<br>Carl Zollinger, pres. | Zollinger Sand & Gravel Co. (374) | Wayne | sand & gravel | 294,928 | 294,800 | We-15 | IM-398 |

[88]No report filed in 1988.

## 1988 PRODUCING LIMESTONE/DOLOMITE COMPANIES

| Company | No. of operations | Sales (tons) | Production (tons) | Company | No. of operations | Sales (tons) | Production (tons) |
|---|---|---|---|---|---|---|---|
| American Aggregates Corp. | 12 | 5,949,624 | 5,792,435 | Maxville Quarries, Inc. | 1 | 187,210 | 187,210 |
| Armco, Inc. | 1 | 300,225 | 232,650 | McCarthy Stone Quarry | 1 | 91,778 | 91,778 |
| Ayers Limestone Quarry, Inc. | 1 | 86,508 | 86,508 | Melvin Stone Co. | 3 | 972,380 | 972,380 |
| Belville Mining Co., Inc. | 1 | 21,783 | 21,783 | Miami River Stone Co. | 1 | 488,628 | 418,455 |
| Bluffton Stone Co. | 1 | 136,640 | 126,814 | National Lime & Stone Co. | 7 | 7,767,127 | 7,313,541 |
| Central Ohio Coal Co. | 2 | 278,110 | 278,110 | North Shore Stone Quarries, Inc. | 1 | 8,171 | 8,171 |
| Chesterhill Stone Co. | 1 | 466,903 | 451,873 | Northwood Stone & Asphalt Co. | 1 | 172,288 | 185,190 |
| Christman Quarry | 1 | 87,239 | 87,239 | Ohio Asphaltic Limestone Corp. | 1 | 244,916 | 260,426 |
| Con-Ag, Inc. | 1 | 191,511 | 192,261 | Owens Stone Co., Inc. | 1 | 262,790 | 203,571 |
| Connolly Construction Co., Inc. | 1 | 835,760 | 353,130 | Penry Stone Co. | 1 | 353,698 | 353,698 |
| Cravat Coal Co. | 1 | 17,273 | 16,590 | Pifer Stone Co. | 1 | 3,478 | 0 |
| D & J Energy, Inc. | 1 | 3,350 | 0 | C. F. Poeppelman, Inc. | 1 | 186,335 | 186,335 |
| Davon, Inc. | 2 | 1,830,137 | 1,781,107 | Puskarich Limestone Co. | 1 | 81,083 | 97,389 |
| Diamond Stone Quarries, Inc. | 1[1] | 14,385 | 14,385 | Putnam Stone Co. | 1 | 178,296 | 181,356 |
| C. E. Duff & Son, Inc. | 1 | 225,404 | 225,404 | Ridge Township Quarry | 1 | 55,644 | 45,010 |
| East Ohio Limestone Co. | 1 | 149,669 | 149,669 | L. G. Rockhold & Sons, Inc. | 1 | 214,430 | 201,780 |
| R. A. Eberts Co., Inc. | 1[1] | 303,779 | 303,779 | Rogers Group, Inc., dba | | | |
| Erie Blacktop, Inc. | 1 | 41,019 | 41,019 | Sandusky Crushed Stone Co. | 1 | 2,559,641 | 2,673,540 |
| The France Stone Co. | 6 | 3,100,075 | 3,686,072 | Salt Creek Materials, Inc. | 1 | 2,240 | 2,527 |
| Fuhrer Farms & Mining | 1 | 1,292 | 1,292 | Sidney Sand & Gravel Co. | 1 | 87,341 | 87,341 |
| | | | | Sidwell Bros., Inc. | 1 | 508,557 | 508,357 |
| G & M Supply, Inc., dba | | | | | | | |
| Clinton Stone Co. | 1 | 247,660 | 247,660 | Southwestern Portland Cement Co. | 2 | 1,271,967 | 1,271,967 |
| Gottron Bros. Co. | 1 | 109,538 | 110,076 | Spring Creek Corp. | 1 | 133,516 | 133,516 |
| Gregory Stone Co., Inc. | 1 | 3,402 | 3,402 | Standard Slag Co. | 2 | 1,539,676 | 1,548,886 |
| J. M. Hamilton & Sons Co., Inc. | 1 | 95,232 | 95,232 | Steetley Resources, Inc. | 2 | 990,377 | 644,110 |
| Hardin Quarry Co., Inc. | 1 | 137,238 | 137,238 | Stoneco | 7[3] | 1,824,195 | 1,806,783 |
| Holmes Limestone Co. | 2 | 248,803 | 247,700 | Suever Stone Co., Inc. | 2 | 237,612 | 230,986 |
| Honey Creek Stone Co. | 1 | 167,167 | 197,670 | Sugarcreek Clay & Limestone, Inc. | 1 | 64,709 | 68,930 |
| John W. Karch Stone Co. | 1[2] | 93,615 | 93,615 | Tarbox-McCall Stone Co. | 1 | 255,576 | 243,161 |
| Kimble Clay & Limestone Co. | 1 | 132,359 | 132,359 | Tri-County Limestone Co. | 1 | 151,022 | 151,022 |
| King Limestone, Inc. | 1 | 114,686 | 114,686 | U.S. Cement, Inc. | 1 | 888,467 | 1,561,426 |
| Kohl Industries | 1 | 7,649 | 142,649 | U.S. Gypsum Co. | 1 | 386,966 | 392,082 |
| Edward Kraemer & Sons, Inc. | 1 | 1,170,784 | 1,059,534 | Union Aggregates Co. | 1 | 610,205 | 610,205 |
| Lafarge Corp. | 1 | 697,140 | 704,150 | Wagner Quarries Co. | 1 | 1,547,175 | 1,453,341 |
| Latham Limestone, Inc. | 1 | 310,522 | 276,019 | Waterloo Coal Co., Inc. | 1 | 174,038 | 174,038 |
| Ludlow Stone, Inc. | 1 | 204,387 | 284,271 | Wyandot Dolomite, Inc. | 1 | 987,991 | 1,177,694 |
| | | | | Wysong Stone Co. | 1 | 40,515 | 40,515 |
| MacRitchie Materials, Inc. | 1 | 158,151 | 130,131 | | | | |
| Maple Grove Stone Co. | 1 | 244,596 | 244,596 | | | | |
| Marshall Quarry, Inc. | 1 | 6,478 | 6,478 | TOTAL: 75 companies | 110 | 45,689,233 | 45,525,405 |
| Martin Marietta Chemicals | 1 | 1,969,102 | 1,969,102 | | | | |

[1]This mine operated by Diamond Stone Quarries, Inc. in January 1988 and by R. A. Eberts Co., Inc. February-December 1988.
[2]This mine operated by John W. Karch Stone Co. January-May 1988 and by Stoneco June-December 1988.
[3]One mine operated by John W. Karch Stone Co. January-May 1988 and by Stoneco June-December 1988.

## 1988 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

| County | Name of operator | Name of mine or quarry | Township | Geological unit | Type and principal use | State mine number |
|---|---|---|---|---|---|---|
| Adams | Davon, Inc. | Plum Run Stone Division | Meigs | Peebles, Greenfield & Tymochtee Dolomites (Silurian) | crushed stone—riprap, flux stone, stone for portland cement concrete, building, road base, resurfacing stone, railroad ballast, rock dust, industrial uses; stone for portland cement manufacture; aglime | Ads-1 |
| | Standard Slag Co. | Adams | Franklin | Silurian | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone | Ads-6 |
| Allen | Bluffton Stone Co. | Bluffton Stone Co. | Richland | Tymochtee Dolomite (Silurian) | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, construction; dimension stone; aglime | An-1 |
| | National Lime & Stone Co. | Lima Plant | Bath | Silurian | crushed stone—riprap, building, road base, resurfacing stone, railroad ballast; aglime | An-3[1] |
| | Suever Stone Co., Inc. | Suever Stone Co., Inc. | Spencer | Tymochtee Dolomite (Silurian) | crushed stone—stone for asphaltic concrete, building, road base, resurfacing stone; aglime | An-4 |
| Athens | Diamond Stone Quarries, Inc. | Plant #2 | Lee | | crushed stone—building, road base, resurfacing stone | As-533[2] |
| | R. A. Eberts Co., Inc. | Diamond Stone | Lee | | crushed stone—riprap, building, road base, resurfacing stone | As-533[2] |
| Auglaize | Con-Ag, Inc. | Con-Ag, Inc. | Noble | Cedarville Dolomite (Silurian) | crushed stone—riprap, building, road base, resurfacing stone | Ae-31 |
| | National Lime & Stone Co. | Buckland Plant | Moulton | Silurian | crushed stone—riprap, building, road base, resurfacing stone, railroad ballast; aglime | Ae-10 |
| Belmont | Ayers Limestone Quarry, Inc. | Ayers Limestone Quarry, Inc. | Pease | Permian | crushed stone—riprap, building, road base, resurfacing stone | Bt-716 |
| | Cravat Coal Co. | Dover Pit | York | Fishpot limestone (Pennsylvanian) | crushed stone—building, road base, resurfacing stone | Bt-119 |
| Carroll | Puskarich Limestone Co. | Puskarich Limestone Co. | Lee | Pennsylvanian | crushed stone—building, road base, resurfacing stone | Cl-183 |
| Clark | American Aggregates Corp. | Springfield #623 | Springfield | Cedarville Dolomite (Silurian) | crushed stone—building, road base, resurfacing stone | Ck-1 |
| Clinton | Melvin Stone Co. | Melvin Stone Co. | Richland | Guelph Dolomite (Silurian) | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone; aglime | Cln-1 |
| Crawford | National Lime & Stone Co. | Bucyrus Plant | Holmes | Devonian | crushed stone—riprap, flux stone, building, road base, resurfacing stone, railroad ballast, extenders, fillers; aglime | Cd-1 |
| Darke | American Aggregates Corp. | Fort Jefferson #424 | Butler | Cedarville Dolomite (Silurian) | crushed stone—building, road base, resurfacing stone | Dke-1 |
| Delaware | American Aggregates Corp. | Shawnee #225 | Concord | Columbus & Delaware Limestones (Devonian) | crushed stone—building, road base, resurfacing stone | Del-4 |
| | National Lime & Stone Co. | Delaware Plant | Scioto | Columbus & Delaware Limestones (Devonian) | crushed stone—riprap, flux stone, building, road base, resurfacing stone, railroad ballast; aglime | Del-5 |
| | Owens Stone Co., Inc. | Owens Stone Co., Inc. | Scioto | Columbus Limestone (Devonian) | crushed stone—building, road base, resurfacing stone, unspecified; aglime | Del-3 |
| | Penry Stone Co. | Penry Stone Co. | Radnor | | crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone; dimension stone | Del-2 |

[1]Information for An-3 includes information for An-2 and An-11.
[2]This mine was operated in January 1988 by Diamond Stone Quarries, Inc. and February through December by R. A. Eberts Co., Inc.

## 1988 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

| County | Name of operator | Name of mine or quarry | Township | Geological unit | Type and principal use | State mine number |
|---|---|---|---|---|---|---|
| Erie | Erie Blacktop, Inc. | Erie Blacktop Quarry | Margaretta | | crushed stone—riprap, building, road base, resurfacing stone | Ee-27 |
| | Rogers Group, Inc. (dba Sandusky Crushed Stone Co.) | Sandusky Crushed Stone Co. | Groton | Columbus & Delaware Limestones (Devonian) | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, railroad ballast; aglime; stone sand, stone concrete blocks, stone septic tanks | Ee-11 |
| | Wagner Quarries Co. | Wagner Quarries Co. | Perkins | upper Columbus & Delaware Limestones (Devonian) | crushed stone—building, road base, resurfacing stone | Ee-1 |
| Fayette | American Aggregates Corp. | Blue Rock Limestone #622 | Perry | Tymochtee Dolomite (Silurian) | crushed stone—building, road base, resurfacing stone | Fe-2 |
| | Melvin Stone Co. | Melvin Stone Co. | Green | Tymochtee Dolomite (Silurian) | crushed stone—stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone; aglime | Fe-1 |
| Franklin | American Aggregates Corp. | Columbus Limestone #221 | Marion | Columbus Limestone (Devonian) | crushed stone—building, road base, resurfacing stone | Fn-53 |
| | | Marble Cliff #224 | Norwich | Columbus & Delaware Limestones (Devonian) | crushed stone—building, road base, resurfacing stone | Fn-2 |
| Greene | American Aggregates Corp. | Cedarville Limestone #624 | Cedarville | Cedarville Dolomite (Silurian) | crushed stone—building, road base, resurfacing stone | Ge-17 |
| | | Fairborn Limestone #431 | Sugar Creek | Cedarville Dolomite (Silurian) | crushed stone—building, road base, resurfacing stone | Ge-25 |
| | Southwestern Portland Cement Co. | Southwestern Portland Cement Co. | Bath | upper Brassfield Limestone (Silurian) | stone for portland cement manufacture | Ge-1 |
| Hancock | National Lime & Stone Co. | Findlay Plant | Liberty | Niagaran dolomite (Silurian) | crushed stone—riprap, building, road base, resurfacing stone, railroad ballast, refractory stone; aglime | Hk-1 |
| | Pifer Stone Co. | Pifer Stone Co. | Madison | Tymochtee Dolomite (Silurian) | crushed stone—unspecified | Hk-4 |
| | Tarbox-McCall Stone Co. (Div. of Hancock Ready Mix, Inc.) | Tarbox-McCall Stone Co. | Liberty | Greenfield Dolomite (Silurian) | crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone, railroad ballast | Hk-2 |
| Hardin | Hardin Quarry Co., Inc. | Hardin Quarry Co., Inc. | Pleasant | Tymochtee Dolomite (Silurian) | crushed stone—riprap, building, road base, resurfacing stone; aglime | Hdn-2 |
| Highland | Davon, Inc. | Highland Stone Division | Hamer | Brassfield & Dayton Limestones (Silurian) | crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone, unspecified; stone for portland cement manufacture; aglime | Hd-2 |
| | Marshall Quarry, Inc. | Marshall Quarry, Inc. | Marshall | | crushed stone—building, road base, resurfacing stone | Hd-4 |
| | Ohio Asphaltic Limestone Corp. | Ohio Asphaltic Limestone Corp. | Union | | crushed stone—riprap, stone for asphaltic concrete, building, road base, resurfacing stone, railroad ballast; aglime | Hd-3 |
| Holmes | Holmes Limestone Co. | 241 Plant | Hardy | Putnam Hill limestone (Pennsylvanian) | crushed stone—building, road base, resurfacing stone | Hs-67 |
| Jackson | D & J Energy, Inc. | D & J Energy, Inc. | Bloomfield | | crushed stone—unspecified | Jkn 583 |
| | Waterloo Coal Co., Inc. | Zoar | Bloomfield, Madison | Vanport limestone (Pennsylvanian) | crushed stone—building, road base, resurfacing stone | Jkn-367 |
| Lawrence | Belville Mining Co., Inc. | Brady Creek | Washington | | crushed stone—riprap | Le-403 |
| Logan | Connolly Construction Co., Inc. | East Liberty Quarry | Perry | | crushed stone—unspecified | Lgn-1 |
| | C. E. Duff & Son, Inc. | C. E. Duff & Son, Inc. | Richland | | crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone | Lgn-15 |
| | Northwood Stone & Asphalt Co. | Northwood Stone & Asphalt Co. | Richland | Tymochtee Dolomite (Silurian) | crushed stone—riprap, stone for asphaltic concrete, building, road base, resurfacing stone | Lgn-2 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Lucas | The France Stone Co. | Silica | Sylvania | Detroit River Group (Devonian) | crushed stone—building, road base, resurfacing stone | Ls-3 |
| | | Waterville | Waterville | Tymochtee Dolomite (Silurian) | crushed stone—riprap, building, road base, resurfacing stone | Ls-1 |
| | Stoneco | Maumee Quarry | Waynesfield | | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, railroad ballast, other; aglime | Ls-2 |
| Mahoning | Honey Creek Stone Co. | Honey Creek Stone Co. | Springfield | Vanport limestone (Pennsylvanian) | crushed stone—building, road base, resurfacing stone | Mg-54 |
| | U.S. Cement, Inc. | Quarry #8 | Poland | Vanport limestone (Pennsylvanian) | crushed stone—unspecified; stone for portland cement manufacture; aglime | Mg-608 |
| Marion | J. M. Hamilton & Sons Co., Inc. | J. M. Hamilton & Sons Co., Inc. | Marion | | crushed stone—stone for asphaltic concrete, building, road base, resurfacing stone | Mn-2 |
| | National Lime & Stone Co. | Marion Plant | Grand Prairie, Marion | Columbus & Delaware Limestones (Devonian) | crushed stone—riprap, flux stone, building, road base, resurfacing stone, railroad ballast; aglime | Mn-3 |
| | Tri-County Limestone Co. | Tri-County Limestone Co. | Grand | Silurian | crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone, other; aglime | Mn-1 |
| Mercer | John W. Karch Stone Co. | John W. Karch Stone Co. | Jefferson | Silurian | crushed stone—riprap, building, road base, resurfacing stone; aglime | Mr-1[3] |
| | Stoneco | Celina Quarry | Jefferson | Silurian | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, railroad ballast, other; aglime | Mr-1[3] |
| Miami | Armco, Inc. | Piqua Minerals | Springcreek | Brassfield Limestone, Dayton & Laurel Dolomites (Silurian) | crushed stone—riprap, flux stone, building, road base, resurfacing stone, railroad ballast, fillers; aglime | Mi-1 |
| | Gregory Stone Co., Inc. | Gregory Quarry | Union | | dimension stone | Mi-16 |
| | Ludlow Stone, Inc. | Ludlow Stone, Inc. | Union | Brassfield Limestone (Silurian) | crushed stone—riprap, building, road base, resurfacing stone; aglime | Mi-502 |
| | C. F. Poeppelman, Inc. | C. F. Poeppelman, Inc. | Newberry | Cedarville Dolomite (Silurian) | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, cement block; aglime | Mi-10 |
| Monroe | Christman Quarry | Christman Quarry | Franklin | | crushed stone—unspecified | Mo-501 |
| Montgomery | American Aggregates Corp. | Phillipsburg Limestone #421 | Clay | Cedarville Dolomite (Silurian) | crushed stone—building, road base, resurfacing stone | My-1 |
| | | Dayton Limestone #420 | Madison | Cedarville Dolomite (Silurian) | crushed stone—building, road base, resurfacing stone | My-23 |
| | | Huber Heights Limestone #432 | Van Buren | Cedarville Dolomite (Silurian) | crushed stone—building, road base, resurfacing stone | My-32 |
| | Southwestern Portland Cement Co. | Southwestern Portland Cement Co. | Wayne | upper Brassfield Limestone (Silurian) | stone for portland cement manufacture | My-58 |
| Morgan | Central Ohio Coal Co. | Horse Run | Manchester | Benwood limestone (Pennsylvanian) | crushed stone—building, road base, resurfacing stone | Mon-600 |
| Muskingum | Chesterhill Stone Co. | Plant #1 | Newton | Maxville Limestone (Mississippian) | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, railroad ballast; aglime | Mum-106 |
| | Salt Creek Materials, Inc. | Salt Creek Materials, Inc. | Perry | | crushed stone—building, road base, resurfacing stone | Mum-269 |
| | Sidwell Bros., Inc. | Sidwell Quarry | Newton | Maxville Limestone (Mississippian) | crushed stone—stone for asphaltic concrete, building, road base, resurfacing stone; aglime | Mum-104 |

[3]This mine was operated January through May 1988 by John W. Karch Stone Co. and June through December by Stoneco.

## 1988 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

| County | Name of operator | Name of mine or quarry | Township | Geological unit | Type and principal use | State mine number |
|---|---|---|---|---|---|---|
| Noble | Central Ohio Coal Co. | Hoskinsville Stone Quarry | Brookfield | Benwood & Sewickley limestones (Pennsylvanian) | crushed stone—riprap, building, road base, resurfacing stone | Ne-147 |
| | King Limestone, Inc. | King Limestone, Inc. | Brookfield | Ewing limestone (Pennsylvanian) | crushed stone—building, road base, resurfacing stone | Ne-106 |
| Ottawa | Edward Kraemer & Sons, Inc. | White Rock Quarry | Allen | Guelph Dolomite (Silurian) | crushed stone—riprap, flux stone, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone; aglime | Oa-6 |
| | Standard Slag Co. | Marblehead | Danbury | Columbus Limestone (Devonian) | crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone | Oa-7 |
| | Stoneco | Rocky Ridge | Benton | | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone | Oa-14 |
| | U.S. Gypsum Co. | U.S. Gypsum Co. | Clay | Niagaran dolomite (Silurian) | crushed stone—building, road base, resurfacing stone; lime (burned stone)—building, chemical and industrial | Oa-1 |
| Paulding | The France Stone Co. | Paulding | Crane | Tenmile Creek Dolomite (Devonian) | crushed stone—riprap, building, road base, resurfacing stone | Pg-7 |
| | Lafarge Corp. | Paulding Quarry | Crane | Detroit River Group & Dundee Limestone (Devonian) | stone for portland cement manufacture | Pg-1 |
| | Stoneco | Auglaize Quarry | Auglaize | Detroit River Group & Dundee Limestone (Devonian) | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, railroad ballast, refractory stone, other; aglime | Pg-2 |
| Perry | Maxville Quarries, Inc. | Maxville Quarries, Inc. | Monday Creek | Maxville Limestone (Mississippian) | crushed stone—building, road base, resurfacing stone | Py-235 |
| Pickaway | Melvin Stone Co. | Limestone, Inc. | Perry | | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone | Pky-4 |
| Pike | Latham Limestone, Inc. | Latham Limestone, Inc. | Mifflin | Greenfield Dolomite (Silurian) | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, railroad ballast; aglime | Pke-13 |
| Preble | Wysong Stone Co. | Wysong Stone Co. | Twin | | crushed stone—riprap, building, road base, resurfacing stone; dimension stone | Pre-5 |
| Putnam | Putnam Stone Co. | Putnam Stone Co. | Pleasant, Riley | Silurian | crushed stone—riprap, building, road base, resurfacing stone | Pm-2 |
| Sandusky | Gottron Bros. Co. | Gottron Bros. Co. | Sandusky | Niagaran dolomite (Silurian) | crushed stone—stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, fill, filtration, other | Sy-5 |
| | Martin Marietta Chemicals | Woodville Quarry | Woodville | Guelph Dolomite (Silurian) | crushed stone—riprap, flux stone; lime (burned stone)—chemical and industrial, refractory | Sy-1 |
| | Steetley Resources, Inc. | Woodville | Woodville | Silurian | crushed stone—flux stone, stone for portland cement concrete, building, road base, resurfacing stone; aglime; lime (burned stone)—chemical and industrial, other | Sy-8[4] |
| Seneca | The France Stone Co. | Bloomville | Bloom | Columbus & Delaware Limestones (Devonian) | crushed stone—riprap, building, road base, resurfacing stone; dimension stone; aglime | Sa-3 |
| | | Flat Rock | Thompson | Columbus & Delaware Limestones (Devonian) | crushed stone—riprap, building, road base, resurfacing stone; dimension stone; stone for portland cement manufacture; aglime | Sa-1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Maple Grove Stone Co. | Maple Grove | Liberty | | crushed stone—stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone | Sa-2 |
| | North Shore Stone Quarries, Inc. | North Shore Stone Quarries, Inc. | Thompson | | crushed stone—riprap; dimension stone | Sa-8 |
| Shelby | Miami River Stone Co. | Miami River Stone Co. | Orange | Cedarville Dolomite (Silurian) | crushed stone—riprap, stone for asphaltic concrete, building, road base, resurfacing stone, railroad ballast; aglime | Shy-6 |
| | Sidney Sand & Gravel Co. | Rock Run Quarry | Washington | | crushed stone—riprap | Shy-16 |
| | Spring Creek Corp. | River Quarry | Clinton | | crushed stone—building, road base, resurfacing stone | Shy 15 |
| Stark | East Ohio Limestone Co. | East Ohio Limestone Co. | Lake | Putnam Hill limestone (Pennsylvanian) | crushed stone—building, road base, resurfacing stone | Sk-663 |
| | Kohl Industries | Black Hawk | Bethlehem, Pike | Putnam Hill & Vanport limestones (Pennsylvanian) | crushed stone—building, road base, resurfacing stone | Sk-217 |
| Tuscarawas | Fuhrer Farms & Mining | Fuhrer Farms & Mining | Franklin | Pennsylvanian | crushed stone—building, road base, resurfacing stone | Ts-1961 |
| | Kimble Clay & Limestone Co. | Kimble Clay & Limestone Co. | Dover | Vanport limestone (Pennsylvanian) | crushed stone—riprap, building, road base, resurfacing stone | Ts-1818 |
| | Sugarcreek Clay & Limestone, Inc. | Sugarcreek Clay & Limestone, Inc. | Sugar Creek | | crushed stone—building, road base, resurfacing stone | Ts-1928 |
| Union | L. G. Rockhold & Sons, Inc. | L. G. Rockhold & Sons, Inc. | York | | crushed stone—stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone; aglime | Un-1 |
| | Union Aggregates Co. | Union Limestone Plant | Millcreek | Columbus Limestone (Devonian) | crushed stone—riprap, building, road base, resurfacing stone; aglime | Un-2 |
| Van Wert | Ridge Township Quarry | Ridge Township Quarry | Ridge | Tymochtee Dolomite (Silurian) | crushed stone—unspecified | Vt-7 |
| | Stoneco | Scott Quarry | Union | | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, other | Vt-3 |
| | Suever Stone Co., Inc. | Delphos Quarry | Washington | Tymochtee Dolomite (Silurian) | crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone, railroad ballast, driveway use; stone for portland cement manufacture | Vt-1 |
| Vinton | G & M Supply, Inc. (dba Clinton Stone, Inc.) | Sands Hill Strip | Clinton | | crushed stone—building, road base, resurfacing stone; aglime | Vn-174 |
| Warren | American Aggregates Corp. | Lytle Limestone #422 | Wayne | Brassfield Limestone (Silurian) | crushed stone—building, road base, resurfacing stone | Wan-35 |
| Wayne | Holmes Limestone Co. | Wayne Mines | Franklin | Putnam Hill limestone (Pennsylvanian) | crushed stone—building, road base, resurfacing stone | Hs-79 |
| Wood | The France Stone Co. | Custar | Milton | | crushed stone—riprap, building, road base, resurfacing stone; aglime | Wd-5 |
| | MacRitchie Materials, Inc. | MacRitchie Materials, Inc. | Perry | Lockport & Salina Dolomites (Silurian) | crushed stone—unspecified | Wd-1 |
| | Stoneco | Lime City Quarry | Perrysburg | | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, other | Wd-6 |
| | | Portage Quarry | Portage | Greenfield & Lockport Dolomites (Silurian) | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, other | Wd-11 |
| Wyandot | McCarthy Stone Quarry | McCarthy Stone Quarry | Pitt | Bass Islands Group (Silurian) | crushed stone—stone for asphaltic concrete, building, road base, resurfacing stone | Wt-3 |
| | National Lime & Stone Co. | Carey Plant | Crawford | Silurian | crushed stone—riprap, flux stone, building, road base, resurfacing stone, railroad ballast, extenders, fillers; aglime; lime (burned stone)—chemical and industrial | Wt-1 |
| | Wyandot Dolomite, Inc. | Wyandot Dolomite, Inc. | Crawford | Greenfield & Guelph Dolomites (Silurian) | crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, building, road base, resurfacing stone, railroad ballast, refractory stone, manufacturing sand; aglime | Wt-8 |

[1]Information for Sy-8 includes information for Sy-4.

## 1988 PRODUCING SAND & GRAVEL COMPANIES

| Company | No. of operations | Sales (tons) | Production (tons) |
|---|---|---|---|
| Agg Rok Materials | 1 | 407,935 | 399,617 |
| Aggregate Services, Inc. | 1[1] | 4,821 | 0 |
| American Aggregates Corp. | 18[2] | 7,833,947 | 7,412,891 |
| Apache Aggregate & Paving Co. | 1 | 105,193 | 114,220 |
| Ashcraft Sand & Gravel | 1 | 49,773 | 49,773 |
| Atlas Towing Co. | 1 | 8,986 | 8,986 |
| Aurora Sand & Gravel Co. | 1 | 196,152 | 222,374 |
| B & D Paving, Inc. | 1 | 7,500 | 7,500 |
| Baker Sand, Inc. | 2 | 719,518 | 719,518 |
| Barrett Paving Materials, Inc. | 2 | 423,249 | 423,249 |
| Beaver Creek, Inc. | 1 | 75,173 | 58,846 |
| Beck Sand & Gravel, Inc. | 1 | 301,180 | 301,180 |
| Becky Lane Trucking, Inc. | 1 | 9,038 | 9,038 |
| Paul D. Beery Trucking Co. | 1 | 1,350 | 3,720 |
| Belu & Son Paving, Inc. | 1 | 1,776 | 1,263 |
| Benco Leasing, Inc. | 1 | 24,347 | 20,396 |
| Black Top Contracting, Inc. | 1 | 22,488 | 22,488 |
| Bolin & Bartley, Inc. | 1 | 45,809 | 59,853 |
| Elmer Borchardt, Inc. | 1 | 1,250 | 1,250 |
| D. H. Bowman & Sons, Inc. | 1 | 81,552 | 49,732 |
| Boyd Gravel Co. | 1 | 105,529 | 83,703 |
| Briggs Sand & Gravel, Inc. | 1 | 12,723 | 12,723 |
| Broadway Sand & Gravel, Inc. | 1 | 81,728 | 81,728 |
| D & L Browning Excavating, Inc. | 1 | 40 | 10 |
| Karl Brugmann Sand & Gravel, Inc. | 1 | 79,390 | 72,895 |
| Oscar Brugmann Sand & Gravel, Inc. | 1 | 405,296 | 460,000 |
| James Bunnell, Inc. | 2 | 508,029 | 508,029 |
| Burlington Sand & Gravel Co. | 1 | 7,026 | 5,239 |
| Canton Aggregate | 2 | 719,262 | 719,262 |
| Charlestown Sand & Gravel | 1 | 39,130 | 39,130 |
| Chattin Concrete | 1 | 115 | 0 |
| Chesterhill Stone Co. | 2 | 356,330 | 356,758 |
| Chesterville Sand & Gravel Co., Inc. | 1 | 103,706 | 103,706 |
| Cooper Sand & Gravel | 1 | 7,471 | 7,471 |
| Cox Gravel, Inc. | 2 | 257,782 | 250,170 |
| R. A. Cruise Sand & Gravel, Inc. | 1 | 56,121 | 56,121 |
| Cummins Family Contracting | 1 | 1,232 | 1,232 |
| D & D Sand Bank | 1 | 3,913 | 3,913 |
| Demmy Sand & Gravel | 1 | 11,156 | 11,156 |
| A. J. Diana Sons, Inc. | 1 | 25,170 | 17,669 |
| Dingledine Trucking Service | 1 | 76,825 | 49,959 |
| Dravo Basic Materials Co., Inc. | 7 | 2,811,857 | 4,697,505 |
| Dry Creek Gravel Co. | 2 | 207,100 | 207,100 |
| C. E. Duff & Son, Inc. | 2 | 153,132 | 153,013 |
| Eldean Gravel Co. | 1[2] | 83,967 | 82,063 |
| Elm Spring Farm | 1 | 128 | 128 |
| M. T. Epling Co. | 1 | 5,375 | 5,375 |
| Erie Blacktop, Inc. | 1 | 25,750 | 25,750 |
| Erie Sand & Gravel Co. | 1 dredger | 93,730 | 93,730 |
| Ernst Aggregates, Inc. | 1[2] | 374,887 | 343,400 |
| Ernst Gravel Co. | 1[2] | 198,436 | 179,525 |
| Ernst Material Service, Inc. | 1 | 84,441 | 84,441 |
| Fairfield Ready Mix | 1 | 450,711 | 453,290 |
| Feikert Sand & Gravel, Inc. | 1 | 51,627 | 51,627 |
| Fenner Sand & Gravel, Inc. | 1 | 185,000 | 94,000 |
| Fleckenstein Farm Gravel Pit | 1 | 17,705 | 17,705 |
| Fleming Construction Co., Inc. | 1 | 8,825 | 8,825 |
| Flesher Sand & Gravel, Inc. | 1 | 8,932 | 8,932 |
| Foureman's Sand & Gravel, Inc. | 1 | 38,782 | 38,782 |
| Fredericktown Sand & Gravel Co. | 1 | 17,518 | 0 |
| Frye Sand & Gravel, Inc. | 1 | 3,720 | 3,720 |
| John L. Garber Materials, Inc. | 1 | 271,764 | 280,000 |
| Gerken Materials, Inc. | 1 | 7,437 | 140,440 |
| Goodwin Sand & Gravel, Inc. | 1 | 107,395 | 138,500 |
| H & M Sand & Gravel Co. | 2 | 114,184 | 148,579 |
| Harrison Sand & Gravel Co. | 1 | 108,413 | 106,356 |
| Hartville Sand & Gravel, Inc. | 1 | 1,751 | 0 |
| Haubeil & Sons Asphalt & Materials, Inc. | 1 | 57,532 | 57,532 |
| Haueter Sand & Gravel, Inc. | 1 | 252,931 | 252,931 |
| Heiser Sand & Gravel | 1 | 14,198 | 0 |
| Heiser Stone Co. | 1 | 3,278 | 0 |
| Hillsdale Sand & Gravel, Inc. | 1 | 7,062 | 7,062 |
| Hilltop Aggregate, Inc. | 1 | 379,947 | 379,947 |
| Hilltop Basic Resources, Inc. | 2 | 1,286,255 | 1,183,874 |
| Hilltop Basic Resources, Inc., dba Enon Washed Sand & Gravel Co. | 1 | 296,338 | 231,360 |
| Tom Hollinger Excavating | 1 | 2,164 | 2,164 |
| Hugo Sand Co. | 1 | 68,466 | 42,557 |
| Humphrey Farms | 1 | 1,920 | 1,920 |
| Indian Creek Sand & Gravel Co. | 1 | 23,572 | 23,572 |
| J. P. Sand & Gravel Co. | 1 | 471,184 | 393,637 |
| Janson Soil Service, Inc. | 1 | 190 | 60 |
| Jarrett Sand Co. | 1 | 2,494 | 2,494 |
| Jefferson Materials Co. | 1 | 285,658 | 273,645 |
| Joseph Sand & Gravel | 1 | 8,951 | 8,457 |
| Karg Sand & Gravel Co. | 1 | 24,200 | 25,590 |
| Keener Sand & Clay Co. | 2 | 3,919 | 3,919 |
| Alvin Keiffer Trucking & Excavating | 1 | 594 | 90 |
| Kinsman Sand & Gravel Co. | 1 | 97,037 | 100,600 |
| Kipp's Gravel Co., Inc. | 1 | 91,879 | 91,879 |
| Kirby's Sand & Gravel, Inc. | 1 | 28,892 | 28,892 |
| L & I Trucking & Construction, Inc. | 1 | 105,280 | 60,151 |
| L. & M. Excavators, Inc. | 1 | 24,207 | 24,207 |
| Lake Hope Asphalt, Inc. | 1 | 33,126 | 34,403 |
| Lakeside Sand & Gravel Co. | 1 | 196,312 | 196,312 |
| Lancaster Sand & Gravel Co. | 1 | 453,783 | 363,150 |
| Luburgh, Inc. | 1 | 12,000 | 0 |
| Donald Martin Contracting | 1 | 612 | 612 |
| Martin Farms, Inc. | 1 | 344,687 | 344,687 |
| Masons Sand & Gravel Co. | 1 | 106,436 | 106,436 |
| Massillon Washed Gravel Co. | 1 | 269,783 | 242,738 |
| Mecco, Inc. | 1 | 39,972 | 39,972 |
| Mechanicsburg Sand & Gravel, Inc. | 1 | 108,072 | 100,901 |
| Meigs County Commissioners | 1 | 6,840 | 6,840 |
| Menuez Bros. Sand & Gravel Co. | 1 | 105,665 | 105,665 |
| Mesenburg Bros., Inc. | 1 | 9,282 | 9,282 |
| Mickley Gravel Co. | 1 | 4,596 | 0 |
| Middletown Sand & Gravel Co. | 1 | 111,928 | 111,928 |
| Miller Bros. Gravel, Inc. | 1 | 181,571 | 178,951 |
| H. M. Miller Construction Co. | 1 | 8,627 | 8,627 |
| Miller Sand & Gravel Co. | 1 | 6,297 | 6,297 |
| Miller Sand Co. | 1 | 6,100 | 6,100 |
| Mohican Sand & Gravel, Inc. | 1 | 20,304 | 20,304 |
| Moore's Excavating Co. | 1 | 111,866 | 111,866 |
| National Lime & Stone Co. | 1 | 269,724 | 297,756 |
| Neer's Sand & Gravel | 1 | 189,099 | 175,306 |
| Neiheisel Sand & Gravel | 1 | 6,968 | 6,968 |
| Nelson Sand & Gravel, Inc. | 1 | 44,500 | 43,000 |
| New Carlisle Sand & Gravel Co. | 1 | 154 | 154 |
| New Miami Sand & Gravel, Inc. | 1 | 38,616 | 25,479 |
| Newark Asphalt Co. | 1 | 61,569 | 64,767 |
| Newton Asphalt | 1 | 36,234 | 36,234 |
| North Ridge Materials | 2 | 25,105 | 25,105 |
| Northern Ohio Materials, Inc. | 1 | 244,182 | 244,182 |
| Northmont Sand & Gravel Co. | 1 | 117,480 | 117,480 |
| Carl E. Oeder & Sons Sand & Gravel | 2 | 385,818 | 385,818 |
| Olen Corp. | 2 | 842,268 | 842,268 |
| Oneida Sand & Gravel, Inc. | 1 | 93,603 | 83,357 |
| Osborne Materials Co. | 1 dredger | 87,666 | 87,666 |
| Oster Sand & Gravel, Inc. | 2 | 463,877 | 463,877 |
| Partin Sand & Gravel | 1 | 2,000 | 2,000 |
| Penry Stone Co. | 1 | 70,104 | 60,112 |
| Phillips Sand & Gravel | 1 | 563,446 | 563,446 |
| Portage Lakes Sand & Gravel Co. | 1 | 256,976 | 256,976 |
| Prairie Lane Gravel Co. | 1 | 149,504 | 149,504 |
| Precision Sand & Gravel | 1 | 61,079 | 61,079 |
| Price Sand & Gravel | 1 | 131,360 | 120,549 |
| Purdy Sand & Gravel Co. | 1 | 74,087 | 104,832 |
| Quality Ready Mix, Inc. | 1 | 36,293 | 36,293 |
| R & S, Inc. | 1 | 87,194 | 87,194 |
| Rack Sand, Inc. | 1 | 105,910 | 105,910 |

[1]This mine operated by Aggregate Services, Inc. January-June 1988 and by V.I.P. Contractors, Inc. July-December 1988.
[2]Mines operated by Eldean Gravel Co., Ernst Aggregates, Inc., and Ernst Gravel Co. January-September 1988 were operated by American Aggregates Corp. October-December 1988.

## 1988 PRODUCING SAND & GRAVEL COMPANIES—Continued

| Company | No. of operations | Sales (tons) | Production (tons) | Company | No. of operations | Sales (tons) | Production (tons) |
|---|---|---|---|---|---|---|---|
| J. D. Rhodes | 1 | 196,011 | 196,011 | Stocker Sand & Gravel Co. | 2 | 757,797 | 757,797 |
| Richards & Son, Inc. | 1 | 589,944 | 589,944 | Stoneco | 1 | 175,268 | 156,950 |
| Ries Sand & Gravel | 1 | 6,417 | 6,417 | Teague Gravel Co., Inc. | 1 | 81,397 | 75,040 |
| Riverside Sand & Gravel Co., Inc. | 1 | 93,357 | 86,424 | Three Locks Construction Co. | 1 | 9,948 | 37,858 |
| Gary Roberts Excavating | 1 | 1,000 | 1,000 | Three Rivers Sand & Gravel, Inc. | 1 | 23,140 | 0 |
| Rubber City Sand & Gravel Co. | 1 | 58,365 | 56,017 | Tri-State Asphalt Productions | 1 | 746,659 | 869,738 |
| Rupp Construction, Inc. | 1 | 297,700 | 297,700 | Trout Sand & Gravel Co. | 1 | 37,858 | 37,858 |
| Salt Creek Materials, Inc. | 3 | 3,903 | 2,983 | Troy Gravel Co. | 1[3] | 454,108 | 405,100 |
| Samco, Inc. | 1 | 403,165 | 403,165 | Union Aggregates Co. | 1 | 71,673 | 71,673 |
| Sandman Sand & Stone, Inc. | 3 | 306,511 | 306,511 | Union Slag Corp. | 2 | 88,076 | 89,108 |
| Schilling Contractors, Inc. | 1 | 283 | 120 | V.I.P. Contractors, Inc. | 1[4] | 3,449 | 0 |
| Schloss Paving Co. | 1 | 71,707 | 70,327 | Valley Gravel Co. | 1[3] | 173,489 | 172,400 |
| Scioto Valley Resources | 1 | 364,183 | 250,477 | Van Wey Sand & Gravel, Inc. | 1 | 279,539 | 283,261 |
| Seaway Sand & Stone, Inc. | 1 | 65,642 | 65,642 | Ward Materials, Inc. | 1 | 25,525 | 27,667 |
| Seville Sand & Gravel, Inc. | 2 | 255,782 | 255,782 | Watson Gravel, Inc. | 3 | 1,337,930 | 1,337,930 |
| R. W. Sidley, Inc. | 2 | 125,500 | 215,144 | Weber Sand & Gravel, Inc. | 1 | 228,606 | 228,606 |
| Sidney Sand & Gravel Co. | 1 | 169,493 | 169,493 | Weidle Sand & Gravel, Inc. | 2 | 286,740 | 286,740 |
| Joe Simak & Sons Trucking, Inc. | 1 | 1,606 | 1,606 | Welch Sand & Gravel, Inc. | 2 | 755,798 | 755,798 |
| Small's Sand & Gravel, Inc. | 3 | 288,939 | 270,489 | White Bros. Sand, Inc. | 1 dredger | 116,118 | 116,118 |
| Sober Sand & Gravel Co. | 1 | 460 | 200 | Whitewater Aggregates, Inc. | 1 | 720,181 | 708,502 |
| Soehnlen Bros. Sand & Gravel Co. | 1 | 57,259 | 80,000 | Wise Gravel | 1 | 11,762 | 11,762 |
| Solon Excavators Sand & Gravel, Inc. | 1 | 323,233 | 323,233 | Wright Sand | 1 | 12,977 | 0 |
| Soltis Sand & Gravel | 1 | 4,525 | 4,525 | Wysong Gravel Co. | 2 | 215,030 | 215,030 |
| Spring Creek Corp. | 2 | 427,800 | 427,800 | Xenia Sand, Gravel, & Asphalt Co. | 1 | 15,506 | 13,256 |
| Spring Industries, Inc. | 3 | 420,041 | 628,500 | York Road Gravel Co. | 1 | 59,001 | 55,408 |
| Spring Run Farm & Gravel | 1 | 7,137 | 7,252 | Young's Sand & Gravel Co. | 2 | 222,423 | 227,440 |
| Springfield Sand & Gravel Co. | 1 | 452,420 | 420,650 | Zollinger Sand & Gravel Co. | 1 | 294,928 | 294,800 |
| Standard Slag Co. | 3 | 1,447,222 | 1,472,913 | | | | |
| Stewart & Reichman, Inc. | 1 | 37,476 | 37,476 | TOTAL: 196 companies | 250 | 42,414,408 | 43,585,118 |

[3]Mines operated by Troy Gravel Co. and Valley Gravel Co. January-September 1988 were operated by American Aggregates Corp. October-December 1988.
[4]This mine operated by Aggregate Services, Inc. January-June 1988 and by V.I.P. Contractors, Inc. July-December 1988.

## 1988 OHIO DIRECTORY OF LAKE ERIE AND MAUMEE RIVER SAND AND GRAVEL DREDGERS

| Name of operator | Permitted dredging areas |
|---|---|
| Erie Sand & Gravel Co. | Fairport, Vermilion-Lorain Area "A," Vermilion-Lorain Area "B" |
| Osborne Materials Co. | Fairport, Vermilion-Lorain Area "A," Vermilion-Lorain Area "B" |
| White Bros. Sand, Inc. | Maumee Bay, Maumee River |

## 1988 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

| County | Name of operator | Name of pit | Township | Type and principal use | State mine number |
|---|---|---|---|---|---|
| Allen | Ward Materials, Inc. | Ward Materials, Inc. | Monroe | sand—portland cement concrete, asphaltic concrete, filtration<br>gravel—building, road construction, resurfacing | An-15 |
| Ashland | Alvin Keiffer Trucking & Excavating | Dinsmore Pit | Jackson | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Ald-12 |
| | Ries Sand & Gravel | Ries Sand & Gravel | Mohican | sand—building, road construction, resurfacing<br>gravel—building, road construction, resurfacing | Ald-9 |
| | Young's Sand & Gravel Co. | Young's Sand & Gravel Co. | Green | sand—building, road construction, resurfacing, other<br>gravel—building, road construction, resurfacing, other | Ald-7 |
| | | Young's Sand & Gravel Co. | Green | sand—building, road construction, resurfacing, other<br>gravel—building, road construction, resurfacing, other | Ald-15 |
| Ashtabula | Frye Sand & Gravel, Inc. | Frye Sand & Gravel, Inc. | Denmark | gravel—bank run | Asa-10 |
| | Janson Soil Service, Inc. | Janson Soil Service, Inc. | Morgan | gravel—driveway use, fill | Asa-14 |
| | Kinsman Sand & Gravel Co. | Kinsman Sand & Gravel Co. | Wayne | sand—unspecified<br>gravel—unspecified | Asa-17 |
| | Nelson Sand & Gravel, Inc. | Nelson Sand & Gravel, Inc. | Kingsville | sand—building, road construction, resurfacing, fill | Asa-11 |
| | North Ridge Materials | North Ridge Materials | Kingsville | sand—building<br>gravel—building | Asa-16 |
| | | North Ridge Materials | Kingsville | sand—building<br>gravel—building | Asa-18 |
| | R. W. Sidley, Inc. | Kingsville | Kingsville | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing, filtration, unspecified<br>gravel—building, road construction, resurfacing, filtration, ice control | Asa-15 |
| | Joe Simak & Sons Trucking, Inc. | Penn Line Pit | Richmond | gravel—building, unspecified | Asa-S[1] |
| Athens | Black Top Contracting, Inc. | Black Top #1 | Rome | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | As-588 |
| | Lake Hope Asphalt, Inc. | Lake Hope Asphalt, Inc. | York | sand—asphaltic concrete, fill, unspecified<br>gravel—asphaltic concrete, driveway use, fill, unspecified | As-1161 |
| Auglaize | Joseph Sand & Gravel | Joseph Sand & Gravel | Union | gravel—fill | Ae-23 |
| | National Lime & Stone Co. | Wapakoneta Plant | Union | sand—portland cement concrete, building<br>gravel—portland cement concrete | Ae-30 |
| | Quality Ready Mix, Inc. | Quality Ready Mix, Inc. | Pusheta | sand—unspecified<br>gravel—unspecified | Ae-16 |
| Belmont | Tri-State Asphalt Productions | Tri-State Asphalt Productions | Mead | sand—portland cement concrete, asphaltic concrete<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing, fill, ice control, base, abrasives | Bt-74 |
| Butler | Aggregate Services, Inc. | Aggregate Services, Inc. | St. Clair | sand—other<br>gravel—road construction, resurfacing, other | Br-36[2] |
| | American Aggregates Corp. | Fairfield #711 | Fairfield | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Br-35 |
| | | Hamilton #710 | St. Clair | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Br-5 |

| | | | | | |
|---|---|---|---|---|---|
| | Dingledine Trucking Service | Dingledine Trucking Service | Milford | sand—portland cement concrete, building, golf course construction<br>gravel—building, portland cement concrete, road construction, resurfacing, filtration, fill | Br-50 |
| | Dravo Basic Materials Co., Inc. | Fairfield Plant | Fairfield | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Br-14 |
| | | Ross Plant | Ross | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Br-29 |
| | Fairfield Ready Mix | Fairfield Ready Mix | St. Clair | sand—ready mix concrete<br>gravel—ready mix concrete | Br-53 |
| | Indian Creek Sand & Gravel Co. | Indian Creek Sand & Gravel Co. | Ross | gravel—building, road construction, resurfacing, oversize | Br-40 |
| | Martin Farms, Inc. | Martin Farms, Inc. | Madison | sand—road construction, resurfacing<br>gravel—filtration | Br-52 |
| | Mecco, Inc. | Mecco, Inc. | Lemon | sand—portland cement concrete, building<br>gravel—building, portland cement concrete | Br-15 |
| | Middletown Sand & Gravel Co. | Middletown Sand & Gravel Co. | Lemon | sand—road construction, resurfacing<br>gravel—building, road construction, resurfacing | Br-1 |
| | New Miami Sand & Gravel, Inc. | New Miami Sand & Gravel, Inc. | St. Clair | sand—portland cement concrete, building, road construction, resurfacing, other<br>gravel—building, portland cement concrete, road construction, resurfacing, pipe fill | Br-3 |
| | V.I.P. Contractors, Inc. | V.I.P. Contractors, Inc. | St. Clair | sand—other<br>gravel—road construction, resurfacing, other | Br-36[2] |
| | Watson Gravel, Inc. | Watson Pit | Fairfield | sand—portland cement concrete, asphaltic concrete, building, fill<br>gravel—building, portland cement concrete, road construction, resurfacing | Br-47 |
| | Weidle Sand & Gravel, Inc. | Weidle Sand & Gravel, Inc. | Madison | sand—building<br>gravel—building | Br-6 |
| | Welch Sand & Gravel, Inc. | Schlichter Pit | Fairfield | sand—building<br>gravel—building | Br-38 |
| Carroll | Oneida Sand & Gravel, Inc. | Oneida Sand & Gravel, Inc. | Brown | sand—road construction, resurfacing, unspecified<br>gravel—road construction, resurfacing, unspecified | Cl-204 |
| Champaign | American Aggregates Corp. | Urbana #615 | Urbana | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Cpn-1 |
| | Mechanicsburg Sand & Gravel, Inc. | Mechanicsburg Sand & Gravel, Inc. | Union | sand—unspecified<br>gravel—unspecified | Cpn-22 |
| | Moore's Excavating Co. | Moore's Excavating Co. | Salem | sand—building<br>gravel—building | Cpn-20 |
| Clark | American Aggregates Corp. | Fairborn #413 | Bethel | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Ck-13 |
| | Demmy Sand & Gravel | Demmy Sand & Gravel | Mad River | sand—building<br>gravel—fill | Ck-502 |
| | Hilltop Basic Resources, Inc. (dba Enon Washed Sand & Gravel Co.) | Enon Washed Sand & Gravel Co. | Bethel | sand—portland cement concrete, asphaltic concrete, building<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing, sewer lines | Ck-3 |
| | Hilltop Basic Resources, Inc. | Fairborn Aggregate Plant | Bethel | sand—portland cement concrete, asphaltic concrete, building<br>gravel—portland cement concrete, asphaltic concrete, fill, base, precast | Ge-4[3] |
| | Springfield Sand & Gravel Co. | Springfield Sand & Gravel Co. | Springfield | sand—portland cement concrete, asphaltic concrete, building<br>gravel—building, portland cement concrete, asphaltic concrete, other | Ck-25 |
| Clermont | Kipp's Gravel Co., Inc. | Kipp's Gravel Co., Inc. | Stonelick | sand—unspecified<br>gravel—unspecified | Ct-7 |
| Columbiana | Beaver Creek, Inc. | Beaver Creek, Inc. | Salem | sand—fill, pipe bedding, unspecified<br>gravel—building, driveway use, unspecified | Ca-855 |
| Coshocton | Apache Aggregate & Paving Co. | Apache Aggregate & Paving Co. | Keene | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Cn-783 |

[1]No mine number has been assigned by the Division of Mines.
[2]This mine was operated 1st through 3rd quarters 1988 by Aggregate Services, Inc. and 4th quarter by V.I.P. Contractors, Inc.
[3]See also Greene County.

## 1988 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

| County | Name of operator | Name of pit | Township | Type and principal use | State mine number |
|---|---|---|---|---|---|
| Coshocton (con't) | Boyd Gravel Co. | Boyd Gravel Co. | Bethlehem | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing, filtration, other<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing, filtration, other | Cn-694 |
| | Spring Industries, Inc. | Newcomerstown Plant | Oxford | sand—asphaltic concrete, unspecified | Cn-624 |
| Darke | Foureman's Sand & Gravel, Inc. | Foureman's Sand & Gravel, Inc. | Greenville | sand—unspecified<br>gravel—unspecified | Dke-4 |
| | Tom Hollinger Excavating | Hollinger Gravel Plant | Harrison | gravel—ballast, farm use | Dke-10 |
| Defiance | Hillsdale Sand & Gravel, Inc. | Hillsdale Sand & Gravel, Inc. | Farmer | gravel—road construction, resurfacing, filtration | De-2 |
| Erie | Elmer Borchardt, Inc. | Elmer Borchardt, Inc. | Margaretta | gravel—filtration | Ee-18 |
| | Jarrett Sand Co. | Jarrett Sand Co. | Groton | sand—fill | Ee-29 |
| | Keener Sand & Clay Co. | Huron Plant | Huron | sand—foundry | Ee-5 |
| | Mesenburg Bros., Inc. | Mesenburg Bros., Inc. | Milan | sand—bank run | Ee-24 |
| | Miller Sand Co. | Miller Sand Co. | Margaretta | sand—fill | Ee-28 |
| Fairfield | Paul D. Beery Trucking Co. | Paul D. Beery Trucking Co. | Pleasant | sand—building<br>gravel—road construction, resurfacing | Fd-14 |
| | Lancaster Sand & Gravel Co. | Lancaster Sand & Gravel Co. | Berne | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing, fill<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing, fill | Fd-13 |
| Franklin | Agg Rok Materials (Div. of Wapak Sand & Gravel Co.) | Agg Rok | Franklin | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing | Fn-36 |
| | American Aggregates Corp. | Lockbourne #213 | Hamilton | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Fn-23 |
| | | Columbus #210 | Marion | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Fn-6 |
| | J. P. Sand & Gravel Co. | J. P. Sand & Gravel Co. | Hamilton | sand—building<br>gravel—building | Fn-52 |
| | L. & M. Excavators, Inc. | Westerville Industrial Park | Blendon | sand—building<br>gravel—building | Fn-54 |
| | Masons Sand & Gravel Co. | Masons Sand & Gravel Co. | Hamilton | sand—building<br>gravel—building | Fn-11 |
| | Olen Corp. | Olen Corp. | Brown | sand—building, road construction, resurfacing<br>gravel—building, road construction, resurfacing | Fn-43 |
| | J. D. Rhodes | Ag Materials, Inc. | Hamilton | sand—unspecified<br>gravel—unspecified | Fn-56[4] |
| Gallia | M. T. Epling Co. | Georges Creek Pit | Addison | gravel—pit run | Ga-243 |
| | Keener Sand & Clay Co. | Gallia Plant | Springfield | sand—foundry | Ga-507 |
| Geauga | Haueter Sand & Gravel, Inc. | Haueter Sand & Gravel, Inc. | Burton, Newbury | sand—portland cement concrete, building<br>gravel—road construction, resurfacing, filtration, oversize | Gea-29 |
| | Soltis Sand & Gravel | Soltis Sand & Gravel | Parkman | sand—fill<br>gravel—other | Gea-9 |
| | Teague Gravel Co., Inc. | Teague Gravel Pit | Newbury | sand—building, road construction, resurfacing, nursery use<br>gravel—building, road construction, resurfacing | Gea-35 |
| Greene | American Aggregates Corp. | Haines Rd. #419 | Beaver Creek | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Ge-32 |
| | | Xenia #414 | Beaver Creek | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Ge-33 |
| | | Spring Valley Gravel #434 | Spring Valley | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Ge-42[5] |
| | Ernst Aggregates, Inc. | Spring Valley Plant | Spring Valley | sand—unspecified<br>gravel—unspecified | Ge-42[5] |
| | Hilltop Basic Resources, Inc. | Fairborn Aggregate Plant | Bath | sand—portland cement concrete, asphaltic concrete, building<br>gravel—portland cement concrete, asphaltic concrete, fill, base, precast | Ge-4[6] |

| | | | | | |
|---|---|---|---|---|---|
| | Donald Martin Contracting | Donald Martin Contracting | Spring Valley | sand—pit run | Ge-40 |
| | Phillips Sand & Gravel | Phillips Sand & Gravel | Beaver Creek | sand—unspecified<br>gravel—unspecified | Ge-36 |
| | Xenia Sand, Gravel, & Asphalt Co. | Xenia Sand, Gravel, & Asphalt Co. | Xenia | sand—building, road construction, resurfacing, fill<br>gravel—building, road construction, resurfacing, filtration | Ge-10 |
| Hamilton | American Aggregates Corp. | Harrison #712 | Harrison | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Hmn-37 |
| | | Kilby Rd. #713 | Whitewater | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Hmn-AAC[7] |
| | Ashcraft Sand & Gravel | Ashcraft Sand & Gravel | Whitewater | gravel—building | Hmn-54 |
| | Barrett Paving Materials, Inc. | Miamitown Plant #53 | Crosby | sand—portland cement concrete, asphaltic concrete<br>gravel—portland cement concrete, asphaltic concrete | Hmn-44 |
| | | Newtown Sand & Gravel | Anderson | sand—asphaltic concrete<br>gravel—asphaltic concrete | Hmn-56 |
| | James Bunnell, Inc. | James Bunnell, Inc. | Harrison | sand—other<br>gravel—other | Hmn-50 |
| | | James Bunnell, Inc. | Whitewater | sand—other<br>gravel—other | Hmn-59 |
| | Dravo Basic Materials Co., Inc. | Newtown Plant | Anderson | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Hmn-11 |
| | | Newtown Plant | Anderson | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Hmn 70 |
| | | Camp Dennison Plant | Symmes | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Hmn-5 |
| | | Cleves Plant | Whitewater | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Hmn-68 |
| | Harrison Sand & Gravel Co. | Harrison Sand & Gravel Co. | Harrison | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing, filtration, ice control<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing, filtration | Hmn-17 |
| | Rack Sand, Inc. | Rack Sand, Inc. | Mill Creek | sand—unspecified<br>gravel—unspecified | Hmn-10 |
| | Three Rivers Sand & Gravel, Inc. | Three Rivers Sand & Gravel, Inc. | Miami | gravel—bank run | Hmn-28 |
| | Watson Gravel, Inc. | Harrison Pit | Whitewater | sand—portland cement concrete, asphaltic concrete, building, fill<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing | Hmn 60 |
| | Welch Sand & Gravel, Inc. | East Miami Pit | Colerain | sand—building<br>gravel—building | Hmn-48 |
| | Whitewater Aggregates, Inc. | Whitewater Aggregates, Inc. | Harrison | sand—portland cement concrete<br>gravel—portland cement concrete | Hmn-69 |
| Henry | Gerken Materials, Inc. | Gerken Materials, Inc. | Liberty | sand—road construction, resurfacing | Hy-5 |
| Holmes | Feikert Sand & Gravel, Inc. | Feikert Sand & Gravel, Inc. | Salt Creek | sand—portland cement concrete, building<br>gravel—building, portland cement concrete, road construction, resurfacing, filtration | Hs-511 |
| | Menuez Bros. Sand & Gravel Co. | Fair Pit | Hardy | sand—portland cement concrete, building, ice control<br>gravel—portland cement concrete, road construction, resurfacing, filtration, fill, driveway use | Hs-82 |
| | Spring Run Farm & Gravel | Spring Run Farm & Gravel | Killbuck | sand—building, road construction, resurfacing, fill<br>gravel—building, road construction, resurfacing, fill | Hs-96 |
| Huron | Erie Blacktop, Inc. | Erie Blacktop Sand & Gravel Pit | Norwalk | sand—portland cement concrete | Hrn-16 |
| | Price Sand & Gravel<br>(Div. of Price Asphalt & Paving Co.) | Price Sand & Gravel | Norwalk | sand—portland cement concrete, building, road construction, resurfacing, filtration, other<br>gravel—building | Hrn-1 |
| Knox | Fredericktown Sand & Gravel Co. | Fredericktown Sand & Gravel Co. | Middlebury | sand—unspecified<br>gravel—unspecified | Kx-13 |
| | Goodwin Sand & Gravel, Inc. | Goodwin Sand & Gravel, Inc. | Clinton | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing, other<br>gravel—building, portland cement concrete, road construction, resurfacing, other | Kx-7 |
| | Mickley Gravel Co. | Mickley Gravel Co. | Union | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Kx-5 |

[7]This mine was operated 1st quarter 1988 by J. D. Rhodes and 2nd through 4th quarters by S & S Aggregate, Inc.
[7]This mine was operated 1st through 3rd quarters 1988 by Ernst Aggregates, Inc. and 4th quarter by American Aggregates Corp.
[6]See also Clark County.
[7]No mine number has been assigned by the Division of Mines.

## 1988 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

| County | Name of operator | Name of pit | Township | Type and principal use | State mine number |
|---|---|---|---|---|---|
| Knox (con't) | Olen Corp. | Olen Corp. | Morris | sand—asphaltic concrete, building, road construction, resurfacing<br>gravel—building, road construction, resurfacing | Kx-16 |
| | Purdy Sand & Gravel Co. | Purdy Sand & Gravel Co. | Clinton | sand—building, road construction, resurfacing, other<br>gravel—building, road construction, resurfacing, other | Kx-3 |
| | Small's Sand & Gravel, Inc. | Small's Sand & Gravel, Inc. | College | sand—unspecified | Kx-8 |
| | | Small's Sand & Gravel, Inc. | Harrison | sand—unspecified<br>gravel—unspecified | Kx-15 |
| | | Small's Sand & Gravel, Inc. | Harrison | sand<br>gravel | Kx-17[8] |
| Lake | R. W. Sidley, Inc. | Painesville Pit | Painesville | sand—portland cement concrete, asphaltic concrete, road construction, resurfacing, filtration, unspecified<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing, filtration, unspecified | Lke-7 |
| Lawrence | Becky Lane Trucking, Inc. | Becky Lane Sand | Perry | sand—fill | Le-430 |
| | Burlington Sand & Gravel Co. | Burlington Sand & Gravel Co. | Perry | sand—fill | Le 426 |
| | D & D Sand Bank | D & D Sand Bank | Perry | sand—fill | Le-445 |
| Licking | American Aggregates Corp. | Newark #214 | Newark | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Lg-2 |
| | Dry Creek Gravel Co. | Plant #3 | Newton | sand—road construction, resurfacing, unspecified<br>gravel—building, road construction, resurfacing, unspecified | Lg-DC[9] |
| | | Plant #2 | Washington | sand—portland cement concrete, building, road construction, resurfacing, filtration, unspecified<br>gravel—building, portland cement concrete, road construction, resurfacing, unspecified | Lg-31 |
| | Newark Asphalt Co. | Alexandria Pit | St. Albans | sand—asphaltic concrete, building, road construction, resurfacing, other<br>gravel—asphaltic concrete, road construction, resurfacing | Lg-8 |
| | Gary Roberts Excavating | Gary Roberts Excavating | Madison | sand—base, driveway use<br>gravel—base, driveway use | Lg-504 |
| | Van Wey Sand & Gravel, Inc. | Van Wey Sand & Gravel, Inc. | Newton | sand—foundry, building, road construction, resurfacing<br>gravel—building, road construction, resurfacing | Lg-10 |
| | York Road Gravel Co. | York Road Gravel Co. | Etna | gravel—other | Lg-38 |
| Logan | Cooper Sand & Gravel | Cooper Sand & Gravel | Lake | sand—building<br>gravel—building | Lgn-40 |
| | Cummins Family Contracting | Cummins Family Contracting | Washington | gravel—bank run | Lgn-38 |
| | C. E. Duff & Son, Inc. | C. E. Duff & Son, Inc. | Lake | sand—filtration | Lgn-36 |
| | | Duff Sand Co. | Washington | sand—portland cement concrete, building | Lgn-31 |
| | Neer's Sand & Gravel | Neer's Sand & Gravel | Union | sand—unspecified<br>gravel—unspecified | Lgn-6 |
| Lorain | Belu & Son Paving, Inc. | Belu Sand Pit | Henrietta | sand—fill | Ln-12 |
| Lucas | Sandman Sand & Stone, Inc. | Eber Rd. Pit | Monclova | sand—building | Ls-S1[9] |
| | | Nebraska Pit | Springfield | sand—building | Ls-20[10] |
| | | Dorr Pit | Springfield | sand—building | Ls-S[9] |
| | Seaway Sand & Stone, Inc. | Seaway Sand & Stone, Inc. | Swanton | sand—building | Ls-13 |
| Mahoning | Neiheisel Sand & Gravel | Neiheisel Sand & Gravel | Green | sand—building<br>gravel—building | Mg-NSG[9] |
| Marion | Fleming Construction Co., Inc. | Fleming Construction Co., Inc. | Prospect | sand—filtration<br>gravel—bank run, fill | Mn-16 |
| | Penry Stone Co. | Penry Stone Co. | Prospect | sand—portland cement concrete, building<br>gravel—building, portland cement concrete | Mn-4 |
| | Union Aggregates Co. | Prospect Sand & Gravel Plant | Prospect | sand—building<br>gravel—other | Mn-10 |
| Medina | Baker Sand, Inc. | Baker Sand, Inc. | Harrisville, Westfield | sand—asphaltic concrete, building, road construction, resurfacing<br>gravel—road construction, resurfacing | Ma-4 |

| | | | | | |
|---|---|---|---|---|---|
| | | Baker Sand, Inc. | Westfield | sand—asphaltic concrete, building, road construction, resurfacing, fill<br>gravel—road construction, resurfacing | Ma-20 |
| | Seville Sand & Gravel, Inc. | Seville Sand & Gravel, Inc. | Harrisville | sand<br>gravel | Ma-9[8] |
| | | Seville Sand & Gravel, Inc. | Harrisville | sand—asphaltic concrete, building, road construction, resurfacing<br>gravel—building, road construction, resurfacing | Ma-22 |
| Meigs | Dravo Basic Materials Co., Inc. | Apple Grove Plant | Letart | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Ms-205 |
| | Humphrey Farms | Vivian Humphrey | Olive | gravel—bank run | Ms-295 |
| | Meigs County Commissioners | Meigs County Pit | Letart | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Ms-301 |
| | Richards & Son, Inc. | Richards & Son, Inc. | Letart | sand—asphaltic concrete, building<br>gravel—building, asphaltic concrete, road construction, resurfacing | Ms-298 |
| Miami | American Aggregates Corp. | Troy Gravel #433 | Concord | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Mi-3[11] |
| | | Ernst Gravel #430 | Springcreek | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Mi-6[12] |
| | | Tipp City Gravel #435 | Monroe | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Mi-8[13] |
| | Eldean Gravel Co. | Eldean Gravel Co. | Concord | sand<br>gravel | Mi-2[8,14] |
| | Ernst Gravel Co. | Ernst Gravel Co. | Springcreek | sand—unspecified<br>gravel—unspecified | Mi-6[12] |
| | Fenner Sand & Gravel, Inc. | Woodville Concrete Corp. | Newton | sand—building, unspecified<br>gravel—building, unspecified | Mi-4 |
| | New Carlisle Sand & Gravel Co. | New Carlisle Sand & Gravel Co. | Bethel | sand—fill<br>gravel—fill | Mi-501 |
| | Troy Gravel Co. | Troy Gravel Co. | Concord | sand—unspecified<br>gravel—unspecified | Mi-3[11] |
| | Valley Gravel Co. | Valley Gravel Co. | Monroe | sand—unspecified<br>gravel—unspecified | Mi-8[13] |
| | Wise Gravel | Wise Gravel | Newberry | sand—building, farm use<br>gravel—building, road construction, resurfacing, farm use, driveway use, fill | Mi-9 |
| Monroe | B & D Paving, Inc. | B & D Paving, Inc. | Salem | sand—bank run<br>gravel—bank run | Me-508 |
| Montgomery | American Aggregates Corp. | Rip Rap Road #416 | Wayne | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | My-66 |
| | Broadway Sand & Gravel, Inc. | Broadway Sand & Gravel, Inc. | City of Moraine | sand—building<br>gravel—building | My-65 |
| | Hilltop Basic Resources, Inc. | West Carrollton Aggregate Plant | Jefferson, Miami | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing<br>gravel—portland cement concrete, asphaltic concrete, fill, base | My-19 |
| | Miller Bros. Gravel, Inc. | Miller Bros. Gravel, Inc. | Butler | sand—portland cement concrete, building, filtration, masonry, fill<br>gravel—building, portland cement concrete, filtration, fill | My-52 |
| | Northmont Sand & Gravel Co. | Northmont Sand & Gravel Co. | Randolph | sand—building<br>gravel—building | My-49 |
| | Partin Sand & Gravel | Partin Sand & Gravel | Wayne | gravel—other | My-55 |
| | Weidle Sand & Gravel, Inc. | Weidle Sand & Gravel, Inc. | German | sand—building<br>gravel—building | My-41 |
| Morgan | Chesterhill Stone Co. | Plant #2 | Windsor | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing, unspecified<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing, unspecified | Mon-588 |

[8]Production only, no sales.
[9]No mine number has been assigned by the Division of Mines.
[10]This mine was operated 1st quarter 1988 by Maumee Haulers, Inc. and 2nd through 4th quarters by Sandman Sand & Stone, Inc.
[11]This mine was operated 1st through 3rd quarters 1988 by Troy Gravel Co. and 4th quarter by American Aggregates Corp.
[12]This mine was operated 1st through 3rd quarters 1988 by Ernst Gravel Co. and 4th quarter by American Aggregates Corp.
[13]This mine was operated 1st through 3rd quarters 1988 by Valley Gravel Co. and 4th quarter by American Aggregates Corp.
[14]This mine was operated 1st through 3rd quarters 1988 by Eldean Gravel Co. and 4th quarter by American Aggregates Corp. (No sales or production in 4th quarter).

## 1988 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

| County | Name of operator | Name of pit | Township | Type and principal use | State mine number |
|---|---|---|---|---|---|
| Morrow | Chesterville Sand & Gravel Co., Inc. | Chesterville Sand & Gravel Co., Inc. | Chester | sand—building<br>gravel—building, road construction, resurfacing, filtration, ice control, landscaping | Mw-10 |
| Muskingum | Cox Gravel, Inc. | Jennings-Lacy | Cass | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing, filtration, ice control<br>gravel—portland cement concrete, asphaltic concrete, road construction, resurfacing | Mum-799 |
| | | Prospect | Cass | sand—portland cement concrete, asphaltic concrete, building<br>gravel—portland cement concrete, asphaltic concrete, road construction, resurfacing | Mum-863 |
| | Luburgh, Inc. | A. I. Ball Farm | Falls | sand—fill | Mum-267 |
| | Salt Creek Materials, Inc. | Salt Creek Materials, Inc. | Perry | sand—unspecified<br>gravel—unspecified | Mum-220 |
| | | Salt Creek Materials, Inc. | Perry | sand—unspecified<br>gravel—unspecified | Mum-269 |
| | | Salt Creek Materials, Inc. | Washington | sand<br>gravel | Mum-216[15] |
| Pickaway | American Aggregates Corp. | Circleville #616 | Circleville | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Pky-1 |
| Pike | Chattin Concrete | Chattin Concrete | Seal | sand—unspecified<br>gravel—unspecified | Pke-23 |
| | Standard Slag Co. | Cutlip | Scioto | sand—portland cement concrete, asphaltic concrete, building<br>gravel—portland cement concrete, asphaltic concrete, road construction, resurfacing | Pke-24 |
| Portage | Aurora Sand & Gravel Co. | Aurora Sand & Gravel Co. | Aurora | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Pe-84 |
| | Beck Sand & Gravel, Inc. | Beck Sand & Gravel, Inc. | Shalersville | sand—unspecified<br>gravel—unspecified | Pe-50 |
| | Karl Brugmann Sand & Gravel, Inc. | Karl Brugmann Sand & Gravel, Inc. | Shalersville | sand—building<br>gravel—building | Pe-15 |
| | Oscar Brugmann Sand & Gravel, Inc. | Oscar Brugmann Sand & Gravel, Inc. | Shalersville | sand—unspecified<br>gravel—unspecified | Pe-9 |
| | Charlestown Sand & Gravel | Charlestown Sand & Gravel | Charlestown | sand—unspecified<br>gravel—unspecified | Pe-17 |
| | R. A. Cruise Sand & Gravel, Inc. | R. A. Cruise Sand & Gravel, Inc. | Franklin, Ravenna | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing, filtration, cattle bedding<br>gravel—building, portland cement concrete, road construction, resurfacing, filtration | Pe-45 |
| | Hilltop Aggregate, Inc. | Hilltop Aggregate, Inc. | Suffield | sand—other<br>gravel—other | Pe-56 |
| | Hugo Sand Co. | Hugo Sand Co. | Franklin | sand—building, road construction, resurfacing, other<br>gravel—building, road construction, resurfacing, other | Pe-10 |
| | Jefferson Materials Co. | Howitt | Streetsboro | sand—road construction, resurfacing,<br>gravel—road construction, resurfacing | Pe-63 |
| | Karg Sand & Gravel Co. | Karg Sand & Gravel Co. | Brimfield | sand—fill, sewer lines<br>gravel—driveway use | Pe-83 |
| | Lakeside Sand & Gravel Co. | Lakeside Sand & Gravel Co. | Shalersville | sand—portland cement concrete<br>gravel—building | Pe-40 |
| | Miller Sand & Gravel Co. | Miller Sand & Gravel Co. | Windham | sand—building, base, fill<br>gravel—building, base, fill | Pe-39 |
| | Northern Ohio Materials, Inc. | Northern Ohio Materials, Inc. | Streetsboro | sand—building, road construction, resurfacing<br>gravel—building, road construction, resurfacing | Pe-85 |
| | Schloss Paving Co. | Schloss Paving Co. | Mantua | sand—asphaltic concrete<br>gravel—asphaltic concrete | Pe-60 |
| | Sober Sand & Gravel Co. | Sober Sand & Gravel Co. | Rootstown | sand—fill | Pe-18 |
| | Solon Excavators Sand & Gravel, Inc. | Solon Excavators Sand & Gravel, Inc. | Shalersville | sand—building<br>gravel—building | Pe-36 |

| | | | | | |
|---|---|---|---|---|---|
| | Standard Slag Co. | Shalersville | Shalersville | sand—portland cement concrete, asphaltic concrete<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing | Pe-68 |
| Preble | Wysong Gravel Co. | Camden Plant | Somers | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing | Pre-4 |
| | | West Alexandria Plant | Twin | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing | Pre-6 |
| Richland | Bolin & Bartley, Inc. | Bolin & Bartley Sand & Gravel | Weller | sand—building<br>gravel—building, driveway use | Rd-20 |
| | D. H. Bowman & Sons, Inc. | D. H. Bowman & Sons, Inc. | Jefferson | sand—portland cement concrete, asphaltic concrete, fill, pipe bedding<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing, filtration, fill, pipe bedding | Rd-4 |
| | John L. Garber Materials, Inc. | John L. Garber Materials, Inc. | Troy | sand—foundry<br>gravel—building | Rd-14 |
| | Mohican Sand & Gravel, Inc. | Mohican Sand & Gravel, Inc. | Monroe | sand—building, road construction, resurfacing<br>gravel—building, road construction, resurfacing, utilities, fill | Rd-5 |
| Ross | Elm Spring Farm | Elm Spring Farm | Union | sand—unspecified<br>gravel—unspecified | Rs-26 |
| | Haubeil & Sons Asphalt & Materials, Inc. | Haubeil & Sons Asphalt & Materials, Inc. | Springfield | sand—asphaltic concrete, building, road construction, resurfacing<br>gravel—asphaltic concrete, road construction, resurfacing | Rs-24 |
| | Three Locks Construction Co. | N-3 | Scioto | sand—portland cement concrete, asphaltic concrete, fill<br>gravel—portland cement concrete, asphaltic concrete, road construction, resurfacing, other | Rs-19 |
| Scioto | Schilling Contractors, Inc. | Schilling Contractors, Inc. | Green | sand—fill | So-78 |
| | Scioto Valley Resources | Scioto Valley Resources Division | Valley | sand—portland cement concrete, masonry<br>gravel—road construction, resurfacing | So-100 |
| | Standard Slag Co. | Haverhill | Green | sand—portland cement concrete, asphaltic concrete, building<br>gravel—road construction, resurfacing | So-79 |
| Seneca | Wright Sand | Wright Sand | Eden | sand—fill<br>gravel—fill | Sa-11 |
| Shelby | Fleckenstein Farm Gravel Pit | Fleckenstein Farm Gravel Pit | McLean | sand—fill<br>gravel—fill | Shy-12 |
| | Sidney Sand & Gravel Co. | Milligan & Milligan-Washington Twp. Pit | Washington | sand—bank run<br>gravel—bank run | Shy-13 |
| | Spring Creek Corp. | Pence Deposit | Washington | sand—portland cement concrete, building, road construction, resurfacing<br>gravel—building, portland cement concrete, road construction, resurfacing | Shy-11 |
| | | Jones Deposit | Washington | sand—portland cement concrete, asphaltic concrete, building<br>gravel—building, portland cement concrete, asphaltic concrete | Shy-18 |
| Stark | Canton Aggregate | Canton Aggregate | Jackson | sand—portland cement concrete, asphaltic concrete, other<br>gravel—portland cement concrete, asphaltic concrete, other | Sk-689 |
| | | Canton Aggregate | Plain | sand—portland cement concrete, asphaltic concrete, other<br>gravel—portland cement concrete, asphaltic concrete, other | Sk-681 |
| | A. J. Diana Sons, Inc. | Neidert Pit | Lawrence | sand—unspecified<br>gravel—unspecified | Sk-694 |
| | Hartville Sand & Gravel, Inc. | Hartville Sand & Gravel, Inc. | Lake | sand—portland cement concrete, building<br>gravel—road construction, resurfacing | Sk-182 |
| | Heiser Sand & Gravel | Heiser Sand & Gravel | Jackson | sand—building<br>gravel—road construction, resurfacing | Sk-688 |
| | Massillon Washed Gravel Co. | Massillon Washed Gravel Co. | Bethlehem | sand—building, road construction, resurfacing<br>gravel—portland cement concrete, road construction, resurfacing | Sk-607 |
| | Oster Sand & Gravel, Inc. | Oster Sand & Gravel, Inc. | Jackson, Perry | sand—asphaltic concrete, building, ice control, fill<br>gravel—building, asphaltic concrete, road construction, resurfacing, ice control, fill | Sk-165 |

[15]Production only, no sales.

## 1988 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

| County | Name of operator | Name of pit | Township | Type and principal use | State mine number |
|---|---|---|---|---|---|
| Summit | Flesher Sand & Gravel, Inc. | Flesher Sand & Gravel, Inc. | Norton | sand—foundry, building, road construction, resurfacing<br>gravel—building, landscaping, driveway use | St-52 |
| | H. M. Miller Construction Co. | Krumroy Pit | Springfield | sand—fill<br>gravel—fill | St 46 |
| | Portage Lakes Sand & Gravel Co. | Portage Lakes Sand & Gravel Co. | Coventry | sand—building<br>gravel—building | St-53 |
| | R & S, Inc., | Copley Sand & Gravel | Copley | sand—building, road construction, resurfacing<br>gravel—building, road construction, resurfacing | St-54 |
| | Riverside Sand & Gravel Co., Inc. | Riverside Sand & Gravel Co., Inc. | Stow | sand—building, road construction, resurfacing, city use<br>gravel—building, road construction, resurfacing | St-24 |
| | Rubber City Sand & Gravel Co. | Rubber City Sand & Gravel Co. | Green | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing<br>gravel—building, portland cement concrete, road construction, resurfacing, filtration | St 9 |
| Trumbull | Samco, Inc. | Springbrook | Mesopotamia | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing, fill<br>gravel—building, road construction, resurfacing | Tl 12 |
| Tuscarawas | Benco Leasing, Inc. | Goshen 416 Site | Goshen | sand—building, filtration, drainage, driveway use<br>gravel—building, filtration, driveway use | Ts-1976 |
| | Heiser Stone Co. | Heiser Stone Co. | Franklin | sand—building<br>gravel—road construction, resurfacing | Ts 1977 |
| | Newton Asphalt | 516 | Dover | sand—asphaltic concrete, other<br>gravel—asphaltic concrete, other | Ts-2001 |
| | Oster Sand & Gravel, Inc. | Oster Sand & Gravel, Inc. | Lawrence | sand—asphaltic concrete, building, road construction, resurfacing, ice control, fill<br>gravel—building, asphaltic concrete, road construction, resurfacing, ice control, fill | Ts-1852 |
| | Soehnlen Bros. Sand & Gravel Co. | Soehnlen Bros. Sand & Gravel Co. | Wayne | sand—building, road construction, resurfacing<br>gravel—building, road construction, resurfacing | Ts 1826 |
| | Spring Industries, Inc. | County Line Plant | Franklin | sand—unspecified<br>gravel—building, portland cement concrete, asphaltic concrete, unspecified | Ts-1788 |
| | | Midvale Pit | Goshen | sand—portland cement concrete, asphaltic concrete, building, unspecified<br>gravel—building, portland cement concrete, asphaltic concrete, unspecified | Ts 1771 |
| | Stewart & Reichman, Inc. | Stewart & Reichman, Inc. | Warwick | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Ts-111 |
| | Stocker Sand & Gravel Co. | Stocker Sand & Gravel Co. | Clay | sand—building, road construction, resurfacing<br>gravel—building, road construction, resurfacing | Ts-69 |
| | | Stocker Sand & Gravel Co. | Clay | sand—building, road construction, resurfacing<br>gravel—building, road construction, resurfacing | Ts-125 |
| Warren | American Aggregates Corp. | Franklin #417 | Franklin | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Wan-38 |
| | D & L Browning Excavating, Inc. | Riverside Sand & Gravel | Salem | sand—road construction, resurfacing<br>gravel—road construction, resurfacing | Wan-B[16] |
| | Ernst Material Service, Inc. | Ernst Material Service, Inc. | Salem | sand—building, road construction, resurfacing, unspecified<br>gravel—building, road construction, resurfacing, unspecified | Wan-46 |
| | L & I Trucking & Construction, Inc. | L & I Trucking & Construction, Inc. | Hamilton | sand—unspecified<br>gravel—unspecified | Wan-8 |
| | Carl E. Oeder & Sons Sand & Gravel | Carl E. Oeder & Sons Sand & Gravel | Union | sand—unspecified<br>gravel—unspecified | Wan-41 |
| | Watson Gravel, Inc. | Mason Pit | Union | sand—building, road construction, resurfacing<br>gravel—building, road construction, resurfacing | Wan-10 |
| Washington | Atlas Towing Co. | Belpre Bank Run | Belpre | gravel—unspecified | Wn-54 |
| | Briggs Sand & Gravel, nc. | Briggs Sand & Gravel, Inc. | Warren | sand—building, road construction, resurfacing<br>gravel—road construction, resurfacing | Wn-508 |
| | Chesterhill Stone Co. | Plant #3 | Adams | sand—portland cement concrete, asphaltic concrete, building, road construction, resurfacing, unspecified<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing, unspecified | Wn-56 |

| | | | | | |
|---|---|---|---|---|---|
| | Trout Sand & Gravel Co. | Trout Sand & Gravel Co. | Warren | sand—building<br>gravel—building | Wn-510 |
| | Union Slag Corp. | Plant #3 | Muskingum | sand—asphaltic concrete, road construction, resurfacing, riprap<br>gravel—building, asphaltic concrete, road construction, resurfacing, filtration, fill, riprap | Wn 43 |
| | | Plant #2 | Muskingum | sand—building, road construction, resurfacing, filtration, fill<br>gravel—building, portland cement concrete, asphaltic concrete, road construction, resurfacing, filtration | Wn 44 |
| Wayne | Prairie Lane Gravel Co. | Prairie Lane Gravel Co. | Franklin | sand—unspecified<br>gravel—unspecified | We-11 |
| | Rupp Construction, Inc. | Rupp Construction, Inc. | Baughman | sand—portland cement concrete, asphaltic concrete, building<br>gravel—building, portland cement concrete, asphaltic concrete | We-7 |
| | Zollinger Sand & Gravel Co. | Zollinger Sand & Gravel Co. | Chippewa | sand—unspecified<br>gravel—unspecified | We-15 |
| Williams | Stoneco | South Montpelier | Superior | sand—portland cement concrete, asphaltic concrete, building, other<br>gravel—building, road construction, resurfacing, other | Ws-6 |
| | Weber Sand & Gravel, Inc. | Weber Sand & Gravel, Inc. | St. Joseph | sand—foundry, portland cement concrete, building, filtration<br>gravel—building, farm use, fill | Ws-11 |
| Wyandot | H & M Sand & Gravel Co. | H & M Sand & Gravel Co. | Eden | sand—portland cement concrete, asphaltic concrete, building, filtration<br>gravel—filtration, fill | Wt-5[17] |
| | | H & M Sand & Gravel Co. | Eden | sand | Wt-15[17,18] |
| | Kirby's Sand & Gravel, Inc. | Kirby's Sand & Gravel, Inc. | Eden | sand—building, road construction, resurfacing, filtration<br>gravel—building, asphaltic concrete, filtration | Wt-17 |
| | Precision Sand & Gravel | Precision Sand & Gravel | Crane, Eden | sand—portland cement concrete<br>gravel—building, portland cement concrete | Wt-4 |

[16]No mine number has been assigned by the Division of Mines.
[17]This mine was operated 1st through 3rd quarters 1988 by H & M Sand & Gravel Co. and 4th quarter by National Lime & Stone Co.
[18]Production only, no sales.

## 1988 PRODUCING SANDSTONE/CONGLOMERATE COMPANIES

| Company | No. of operations | Sales (tons) | Production (tons) |
|---|---|---|---|
| Beaver Creek, Inc. | 1 | 37,488 | 27,977 |
| Best Sand Corp. | 1 | 580,993 | 686,683 |
| Best Silica Co. | 1 | 42,724 | 0 |
| Briar Hill Stone Co. | 10 | 23,167 | 18,031 |
| Central Silica Co. | 2 | 429,499 | 429,499 |
| Cleveland Quarries Co. | 2 | 96,998 | 96,998 |
| Conotton Valley Quarries Co. | 1 | 2,462 | 2,462 |
| Gwin Contracting Co. | 1 | 34,709 | 34,709 |
| Hard Rocks, Inc. | 1 | 30,946 | 48,105 |
| Kimble Clay & Limestone Co. | 1 | 9,969 | 9,969 |
| Mesenburg Bros., Inc. | 1 | 108,777 | 108,777 |
| Schrader Sand & Gravel | 1 | 7,843 | 9,755 |
| R. W. Sidley, Inc. | 1 | 121,000 | 220,270 |
| Southern Silica, Inc. | 1 | 217,878 | 217,878 |
| U.S. Silica Co. | 1 | 38,529 | 38,529 |
| Waller Bros. Stone Co. | 2 | 23,664 | 23,664 |
| TOTAL: 16 companies | 28 | 1,806,646 | 1,973,306 |

Central Silica Co. sandstone quarry, Perry County. Photo taken during 1989 Ohio's Mineral Industries Teachers Workshop.

## 1988 OHIO DIRECTORY OF SANDSTONE/CONGLOMERATE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

| County | Name of operator | Name of quarry | Township | Geological unit | Type and principal use | State mine number |
|---|---|---|---|---|---|---|
| Carroll | Conotton Valley Quarries Co. | Conotton Valley Quarries Co. | Lee | | dimension stone—finished | Cl-102 |
| Columbiana | Beaver Creek, Inc. | Beaver Creek, Inc. | Salem | | crushed or broken stone—aggregate, base material, unspecified | Ca-855 |
| Coshocton | Briar Hill Stone Co. | Quarry #26 | Monroe | Massillon (Pennsylvanian) | dimension stone—rough architectural | Cn-13 |
| | | Quarry #32 | Monroe | Massillon (Pennsylvanian) | dimension stone—rough architectural | Cn-686 |
| | | Quarry #24 | Monroe | Massillon (Pennsylvanian) | dimension stone—rough architectural | Cn-692 |
| | | Quarry #54 | Monroe | Massillon (Pennsylvanian) | dimension stone—rough architectural | Cn-809 |
| | | Quarry #55 | Monroe | Massillon (Pennsylvanian) | dimension stone—rough architectural | Cn-815 |
| | | Quarry #18 | New Castle | Massillon (Pennsylvanian) | dimension stone—rough architectural | Cn-695 |
| | | Quarry #3 | Tiverton | Massillon (Pennsylvanian) | dimension stone—rough architectural | Cn 659 |
| Erie | Cleveland Quarries Co. | Birmingham Quarry | Florence | Berea (Mississippian) | dimension stone—rubble, grindstones, finished, flagging | Ee-21 |
| Geauga | Best Sand Corp. | Best Sand Corp. | Munson | Sharon conglomerate (Pennsylvanian) | crushed or broken stone—foundry sand, glass sand, metallurgical pebble, refractory, riprap, aggregate, fire and furnace sand, polishing/grinding sand, engine sand, frac sand, trap sand, ice control | Gea-3 |
| | Best Silica Co. | Best Silica Co. | Bainbridge | Sharon conglomerate (Pennsylvanian) | crushed or broken stone—foundry sand, aggregate, trap sand | Gea-36 |
| | R. W. Sidley, Inc. | Thompson Pit | Thompson | Sharon conglomerate (Pennsylvanian) | crushed or broken stone—metallurgical pebble, aggregate, other<br>dimension stone—rough construction | Gea-1 |
| Holmes | Briar Hill Stone Co. | Quarry #31 | Knox | Massillon (Pennsylvanian) | dimension stone—rough architectural | Hs-49 |
| Huron | Mesenburg Bros., Inc. | Mesenburg Bros., Inc. | Townsend | Berea (Mississippian) | crushed or broken stone—riprap | Hrn-8 |
| Knox | Briar Hill Stone Co. | Quarry #6 | Jefferson | Massillon (Pennsylvanian) | dimension stone—rough architectural | Kx-12 |
| | | Quarry #34 | Union | Massillon (Pennsylvanian) | dimension stone—rough architectural | Kx-10 |
| | Central Silica Co. | Millwood Sand Division | Union | Black Hand (Mississippian) | crushed or broken stone—foundry sand, glass sand, silica flour, engine sand, frac sand, unspecified | Kx-1 |
| Lorain | Cleveland Quarries Co. | Amherst Quarries | Amherst | Berea (Mississippian) | crushed or broken stone—aggregate<br>dimension stone—rubble, grindstones, finished, flagging | Ln-3 |
| Mahoning | Gwin Contracting Co. | Gwin Contracting Co. | Milton | Sharon sandstone (Pennsylvanian) | crushed or broken stone—fractured laminated sand rock | Mg-62 |
| Perry | Central Silica Co. | Central Silica Co. | Hopewell | Massillon (Pennsylvanian) | crushed or broken stone—foundry sand, glass sand, silica flour, other | Py-202 |
| Pike | Shrader Sand & Gravel | Shrader Sand & Gravel | Jackson | | crushed or broken stone—metallurgical pebble, filter gravel | Pke-31 |
| Ross | Southern Silica, Inc. | Southern Silica, Inc. | Jefferson | Sharon conglomerate (Pennsylvanian) | crushed or broken stone—foundry sand, glass sand, engine sand, fill, filtration, construction<br>dimension stone—rough construction | Rs-16 |
| Scioto | Waller Bros. Stone Co. | Inskeep Quarry | Rush | | dimension stone—rough construction | So-48 |
| | | Crabtree Quarry | Morgan, Rush, Union | Buena Vista (Mississippian) | dimension stone—rough construction | So-76 |
| Trumbull | Hard Rocks, Inc. | Hard Rocks, Inc. | Kinsman | | crushed or broken stone—aggregate | Tl-13 |
| Tuscarawas | Kimble Clay & Limestone Co. | Kimble Clay & Limestone Co. | Dover | | crushed or broken stone—riprap | Ts-1818 |
| | U.S. Silica Co. | Coxey Works | Wayne | Massillon (Pennsylvanian) | crushed or broken stone—fire and furnace sand | Ts-1660 |

## 1988 PRODUCING CLAY COMPANIES

| Company | No. of operations | Sales (tons) | Production (tons) |
|---|---|---|---|
| American Olean Tile Co. | 1 | 8,372 | 0 |
| Belden Brick Co. | 5 | 280,947 | 280,947 |
| Belville Mining Co., Inc. | 2 | 40,077 | 40,077 |
| Bowerston Shale Co. | 1 | 3,688 | 3,688 |
| Cedar Heights Clay Co. | 2 | 24,303 | 24,303 |
| Clark Clay Co. | 1 | 5,088 | 1,800 |
| Claycraft Co. | 1 | 29,763 | 29,763 |
| Dennis Clay Co. | 3 | 29,829 | 181,329 |
| East Ohio Limestone Co. | 1 | 483 | 483 |
| Eberhart Coal, Inc. | 1 | 13,952 | 10,796 |
| General Clay Products Corp. | 2 | 20,214 | 20,214 |
| Holmes Limestone Co. | 2 | 40,972 | 40,982 |
| Kimble Clay & Limestone Co. | 1 | 882,347 | 882,347 |
| Kohl Industries | 1 | 29,380 | 174,380 |
| L & M Mineral Co. | 2 | 32,650 | 32,650 |
| Lafarge Corp. | 1 | 182,764 | 182,764 |
| Miller Bros. Clay Works, Inc. | 1 | 1,200 | 1,200 |
| Nutter Bros. Coal Co., Inc. | 1 | 41,944 | 41,944 |
| Sandkuhl Tile Co. | 1 | 4,153 | 4,873 |
| Southwestern Portland Cement Co. | 1 | 124,516 | 124,516 |
| Stone Creek Brick Co. | 1 | 63,075 | 63,075 |
| Waterloo Coal Co., Inc. | 1 | 19,967 | 19,967 |
| Zoar Mining Co. | 2 | 22,494 | 22,494 |
| TOTAL: 23 companies | 35 | 1,902,178 | 2,184,592 |

General Clay Products Corp. brick plant, Hocking County, *circa* late 1950's.

## 1988 OHIO DIRECTORY OF CLAY-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

| County | Name of operator | Name of mine | Township | Geological unit | Principal use | State mine number |
|---|---|---|---|---|---|---|
| Auglaize | Sandkuhl Tile Co. | Sandkuhl Tile Co. | Salem | Pleistocene glacial clay | common clay products | Ae-7 |
| Coshocton | General Clay Products Corp. | Drescher Pit | Crawford | Lower Kittanning (Pennsylvanian) | unspecified | Cn-787 |
| Greene | Southwestern Portland Cement Co. | Southwestern Portland Cement Co. | Bath | till | cement manufacture | Ge-8 |
| Hocking | General Clay Products Corp. | General Clay Products Corp. | Falls Gore | No. 5 fire clay (Pennsylvanian) | vitrified products | Hg-205 |
| Holmes | Clark Clay Co. | Clark Clay Co. | Hardy | Putnam Hill (Pennsylvanian) | common clay products | Hs-56 |
| | Holmes Limestone Co. | 241 Plant | Hardy | Brookville & Putnam Hill (Pennsylvanian) | common clay products | Hs-67 |
| Jackson | Cedar Heights Clay Co. | Shumate/Alban | Madison | No. 5 clay (Pennsylvanian) | common clay products | Jkn-1001 |
| | | Cedarloo/Jenkins | Madison | No. 5 clay (Pennsylvanian) | common clay products | Jkn-1007 |
| | Waterloo Coal Co., Inc. | Zoar | Bloomfield, Madison | Kittanning (Pennsylvanian) | common clay products | Jkn-367 |
| Lawrence | American Olean Tile Co. | Jefferys | Elizabeth | No. 5 clay (Pennsylvanian) | common clay products | Le-440 |
| | Belville Mining Co., Inc. | Brady Creek | Washington | | common clay products | Le-403 |
| | | Brady Creek | Washington | | common clay products | Le-449 |
| Muskingum | Bowerston Shale Co. | Frazeysburg | Jackson | Flint Ridge & Middle Mercer (Pennsylvanian) | vitrified products | Mum 776 |
| | Dennis Clay Co. | Corder Mine | Newton | No. 5 clay (Pennsylvanian) | common clay products | Mum-D[1] |
| Paulding | Lafarge Corp. | Paulding Quarry | Crane | Detroit River & upper Dundee (Devonian) | cement manufacture | Pg-1 |
| Perry | Dennis Clay Co. | Olson Mine | Harrison | No. 5 clay (Pennsylvanian) | common clay products | Py 296 |
| | | Browning-Bateson-Ferguson-Hall | Harrison | No. 6 clay (Pennsylvanian) | plugging material | Py-331 |
| | Nutter Bros. Coal Co., Inc. | Nutter Bros. Coal Co., Inc. | Monday Creek | | common clay products | Py-259 |
| Putnam | Miller Bros. Clay Works, Inc. | Miller Bros. Clay Works, Inc. | Monterey | | common clay products | Pm-9 |
| Stark | East Ohio Limestone Co. | East Ohio Limestone Co. | Lake | | lightweight aggregate | Sk-663 |
| | Holmes Limestone Co. | Bolivar Mine | Bethlehem | Brookville (Pennsylvanian) | common clay products | Sk-235 |
| | Kohl Industries | Black Hawk | Bethlehem, Pike | Brookville, Putnam Hill, Vanport & Lower Kittanning (Pennsylvanian) | refractories | Sk-217 |
| Tuscarawas | Belden Brick Co. | Belden-Wallick | Franklin, Wayne | Brookville (Pennsylvanian) | common clay products | Ts-1841 |
| | | Moomaw Pit | Sugar Creek | Brookville (Pennsylvanian) | common clay products | Ts-1517 |
| | | Finzer-Belden | Sugar Creek | Brookville & Lower Kittanning (Pennsylvanian) | common clay products | Ts-1646 |
| | | Shanesville Pit | Sugar Creek | Brookville (Pennsylvanian) | common clay products | Ts-1939 |
| | | Beagle Pit | Sugar Creek | Brookville (Pennsylvanian) | common clay products | Ts-1960 |
| | Eberhart Coal, Inc. | Eberhart #2 Hott Strip | Lawrence | Lower Kittanning (Pennsylvanian) | glazed ware | Ts-1994 |
| | Kimble Clay & Limestone Co. | Kimble Clay & Limestone Co. | Dover | Vanport (Pennsylvanian) | common clay products, refractories, construction | Ts-1818 |
| | L & M Mineral Co. | Luikert | Mill | | common clay products | Ts-1914 |
| | | Spring | Mill, Warwick | | common clay products | Ts-1982 |
| | Stone Creek Brick Co. | Stone Creek Clay Mine | Jefferson | | vitrified products | Ts-1557 |
| | Zoar Mining Co. | Zoar Mining Co. | Sandy | | common clay products | Ts-538 |
| | | Zoar Mining Co. | Sandy | | common clay products | Ts-540 |
| Wyandot | Claycraft Co. | Claycraft Plant #1 Clay Pit | Crane | alluvial clay | common clay products | Wt-7 |

[1]No mine number has been assigned by the Division of Mines.

## 1988 PRODUCING SHALE COMPANIES

| Company | No. of operations | Sales (tons) | Production (tons) |
|---|---|---|---|
| Belden Brick Co. | 4 | 316,249 | 316,249 |
| Bowerston Shale Co. | 2 | 55,524 | 55,524 |
| Claycraft Co. | 1 | 655,600 | 655,600 |
| Dennis Clay Co. | 1 | 30,600 | 50,000 |
| Dome Minerals, Inc. | 1 | 475 | 0 |
| General Clay Products Corp. | 4 | 93,848 | 93,848 |
| Glen-Gery Corp. | 1 | 116,277 | 116,277 |
| Hydraulic Press Brick Co. | 1 | 238,913 | 228,174 |
| Kimble Clay & Limestone Co. | 1 | 444,557 | 444,557 |
| L & M Mineral Co. | 3 | 73,678 | 69,217 |
| London Tile Co. | 1 | 971 | 971 |
| Stone Creek Brick Co. | 1 | 7,795 | 7,795 |
| Summitville Tiles, Inc. | 1 | 57,625 | 57,625 |
| Towne Square Products | 1 | 1,824 | 1,824 |
| U.S. Cement, Inc. | 1 | 105,878 | 105,878 |
| Zoar Mining Co. | 2 | 9,500 | 9,500 |
| TOTAL: 16 companies | 26 | 2,209,314 | 2,213,039 |

Bowerston Shale Co. brick plant, Licking County. Photo taken during 1989 Ohio's Mineral Industries Teachers Workshop.

## 1988 OHIO DIRECTORY OF SHALE-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

| County | Name of operator | Name of mine | Township | Geological unit | Principal use | State mine number |
|---|---|---|---|---|---|---|
| Ashland | London Tile Co. | Biglow | Ruggles | Bedford (Mississippian) | common clay products | Ald-1 |
| Columbiana | Dome Minerals, Inc. | Dome Minerals, Inc. | Franklin | | building bricks | Ca-947 |
| | Summitville Tiles, Inc. | Summitville Tiles, Inc. | Franklin | | common clay products | Ca-205 |
| Coshocton | General Clay Products Corp. | Drescher Pit | Crawford | Lower Kittanning (Pennsylvanian) | unspecified | Cn-787 |
| Cuyahoga | Hydraulic Press Brick Co. | Hydraulic Press Brick Co. | City of Independence | Chagrin (Devonian) | lightweight aggregate | Cya-19 |
| Franklin | Claycraft Co. | Claycraft Plant #4 Shale Pit | Jefferson | | common clay products, landfill cover | Fn-1 |
| Harrison | Bowerston Shale Co. | Bowerston | Monroe | Conemaugh (Pennsylvanian) | vitrified products | Hn-152 |
| Hocking | General Clay Products Corp. | General Clay Products Corp. | Falls Gore | No. 5 fire clay (Pennsylvanian) | vitrified products | Hg-205 |
| Holmes | General Clay Products Corp. | Troyer Pit | Clark | Lower Kittanning (Pennsylvanian) | common clay products, unspecified | Hs-77 |
| Licking | Bowerston Shale Co. | Hanover | Hanover | Logan (Mississippian) | vitrified products | Lg-501 |
| Mahoning | U.S. Cement, Inc. | Quarry #8 | Poland | Vanport (Pennsylvanian) | cement manufacture | Mg-608 |
| Marion | Glen-Gery Corp. | Glen-Gery Corp. | Tully | Bedford (Mississippian) | common clay products | Mn-7 |
| Medina | General Clay Products Corp. | General Clay Products Corp. | Wadsworth | | common clay products | Ma-6 |
| Noble | Towne Square Products | Towne Square Products | Buffalo | | common clay products | Ne-66 |
| Perry | Dennis Clay Co. | Browning-Bateson-Ferguson-Hall | Harrison | Pennsylvanian | plugging material | Py-331 |
| Tuscarawas | Belden Brick Co. | Belden-Wallick | Franklin, Wayne | Brookville & Strasburg (Pennsylvanian) | common clay products | Ts 1841 |
| | | Moomaw Pit | Sugar Creek | Brookville & Tionesta (Pennsylvanian) | common clay products | Ts-1517 |
| | | Finzer-Belden | Sugar Creek | Brookville & Tionesta (Pennsylvanian) | common clay products | Ts-1646 |
| | | Shanesville Pit | Sugar Creek | Brookville (Pennsylvanian) | common clay products | Ts-1939 |
| | Kimble Clay & Limestone Co. | Kimble Clay & Limestone Co. | Dover | Vanport (Pennsylvanian) | common clay products, construction | Ts-1818 |
| | L & M Mineral Co. | Evans | Mill, Rush, Warwick | | common clay products | Ts-1884 |
| | | Holmes | Mill, Rush | | common clay products | Ts-1981 |
| | | Spring | Mill, Warwick | | common clay products | Ts-1982 |
| | Stone Creek Brick Co. | Stone Creek Shale Pit | Jefferson | | vitrified products | Ts-1558 |
| | Zoar Mining Co. | Zoar Mining Co. | Sandy | | common clay products | Ts-538 |
| | | Zoar Mining Co. | Sandy | | common clay products | Ts-540 |

## 1988 OHIO DIRECTORY OF GYPSUM-MINE OPERATORS REPORTING SALES OR PRODUCTION

| County | Name of operator | Name of mine | Township | Geological unit | State mine number |
|---|---|---|---|---|---|
| Ottawa | Celotex Corp. | American #2 | Portage | Silurian | Oa-2 |

## 1988 OHIO DIRECTORY OF SALT-MINE AND SALT-BRINING-PLANT OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

| County | Name of operator | Name of mine | Township | Geological unit and product | State mine number |
|---|---|---|---|---|---|
| Cuyahoga | International Salt Co. | Cleveland Mine | City of Cleveland | Salina (Silurian)—rock salt | Cya-30 |
| Lake | Morton Thiokol, Inc. | Fairport Mine | Painesville | Salina (Silurian)—rock salt | Lke-6 |
| Licking | R. H. Penick Co. | R. H. Penick Co. | Newark | "Newburg" (Silurian)—natural brine | Lg-45 |
| Summit | Diamond Crystal Salt Co. | Diamond Crystal Salt Co. | Coventry | Salina (Silurian)—artificial brine | St-9127[1] |
| | International Salt Co. | International Salt Co. | Coventry | Salina (Silurian)—artificial brine | St-9127[1] |
| Wayne | Morton Thiokol, Inc. | Morton Salt Well Field | Milton | Salina (Silurian)—artificial brine | We-9129 |

[1]This mine was operated 1st quarter 1988 by Diamond Crystal Salt Co. and 2nd through 4th quarters by International Salt Co.

## 1988 OHIO DIRECTORY OF PEAT-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

| County | Name of operator | Name of mine | Township | Type and principal use | State mine number |
|---|---|---|---|---|---|
| Ashland | Mohican Organic Products, Inc. | Mohican Pit | Mifflin | unspecified | Ald-13 |
| Champaign | Sphagnum Moss Peat Farm | Sphagnum Moss Peat Farm | Harrison | mulch, humus—worm culture | Cpn-9 |
| Richland | Dan Jacobs | Dan Jacobs | Mifflin | unspecified | Rd-19 |
| Williams | Lingvai Peat Co. | Lingvai Peat Co. | Center | mulch | Ws-17 |

# NUMERICAL INDEX OF OPERATORS OF MINES SHOWN ON 1988 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY

## COAL ● ○

| *Map location number* | *County* | *Name of operator* |
|---|---|---|
| 2 | As | Nutter Bros. Coal Co., Inc. |
| 3 | Bt | Ohio Valley Coal Co. |
| 4 | Bt | Cravat Coal Co. |
| 10 | Bt | Ohio River Collieries, Inc. |
| 13 | Bt | Marietta Coal Co. |
| 16 | Bt | Saginaw Mining Co. |
| 18 | Bt | Ohio Coal & Construction Corp. |
| 19 | Bt | Fairpoint Coal Co. |
| 23 | Bt | Joyce Coal Co., Inc. |
| 24 | Bt | R & F Coal Co. |
| 25 | Bt | Ohio River Collieries, Inc. |
| 27 | Bt | Ohio River Collieries, Inc. |
| 30 | Bt | R & F Coal Co. |
| 33 | Bt | GEX Hardy, Inc. |
| 36 | Bt | Ohio River Collieries, Inc. |
| 38 | Bt | Marietta Coal Co. |
| 39 | Bt | Marietta Coal Co. |
| 42 | Bt | Marietta Coal Co. |
| 46 | Bt | R & F Coal Co. |
| 47 | Bt | Cravat Coal Co. |
| 49 | Bt | Ohio Coal & Construction Corp. |
| 51 | Bt | K.C.C.I. |
| 52 | Bt | Cravat Coal Co. |
| 53 | Bt | Marietta Coal Co. |
| 56 | Bt | R & F Coal Co. |
| 58 | Bt | Marietta Coal Co. |
| 59 | Cl | James Bros. Coal Co. |
| 61 | Cl | James Bros. Coal Co. |
| 62 | Cl | Puskarich Limestone Co. |
| 70 | Cl | Mac Mining Co. |
| 74 | Ca | East Fairfield Coal Co. |
| 77 | Ca | Crawford Coal Co. |
| 82 | Ca | D. & D. Mining Co. |
| 85 | Ca | D. & D. Mining Co. |
| 86 | Ca | D. & D. Mining Co., John Glenn Mining |
| 98 | Ca | Commercial Minerals, Inc. |
| 104 | Hs | Holmes Limestone Co. |
| 106 | Cn | G & M Mineral Co. |
| 112 | Cn | Peabody Coal Co. |
| 120 | Cn, Gy | R & F Coal Co. |
| 121 | Cn | R & F Coal Co. |
| 122 | Cn | R & F Coal Co. |
| 123 | Cn | R & F Coal Co. |
| 124 | Cn | R & F Coal Co. |
| 126 | Ga | Merco Mining, Inc. |
| 130 | Gy, Ts | R & F Coal Co. |
| 137 | Bt, Hn | Consolidation Coal Co. |
| 139 | Bt, Hn | Fairpoint Coal Co. |
| 144 | Hn | W. B. Coal Co. |
| 146 | Hn | Varkony Mining Co. |
| 147 | Hn | R & F Coal Co. |
| 150 | Bt, Hn | Consolidation Coal Co. |
| 153 | Hn | R & F Coal Co. |
| 155 | Hn, Jfn | R & F Coal Co. |
| 156 | Hn | R & F Coal Co. |
| 157 | Hg | Valley Coal Corp. |
| 158 | Hg | Valley Coal Corp. |
| 161 | Hs | Holmes Limestone Co. |
| 162 | Hs, We | Holmes Limestone Co. |
| 164 | Hs | Holmes Limestone Co. |
| 165 | Jkn | Waterloo Coal Co., Inc. |
| 167 | Jkn | Milton Mining Co., Inc. |
| 169 | Jkn | B. & D. Coal, Inc. |
| 171 | Jkn | Elk Coal, Inc. |
| 172 | Jkn | Stewart Coal Co. |
| 175 | Jkn | LaMay Industries, Inc. |
| 176 | Jkn | Sands Hill Coal Co., Inc. |
| 178 | Jfn | Boich Mining Co. |
| 180 | Jfn | Weirton Construction Co. |
| 181 | Jfn | Zimnox Coal Co. |
| 183 | Jfn | R & F Coal Co. |
| 185 | Jfn | D & L Contractors, Inc. |
| 186 | Jfn | F. & M. Coal Co. |
| 187 | Jfn | Valley Mining, Inc. |
| 189 | Jfn | Anthony Mining Co., Inc. |
| 190 | Jfn | Anthony Mining Co., Inc. |
| 193 | Jfn | Ohio Edison Co. |
| 195 | Jfn | Schiappa Coal Co., Inc. |
| 196 | Jfn | S. & D. Construction Corp. |
| 197 | Jfn | Ohio Coal & Construction Corp. |
| 201 | Jfn | R & F Coal Co. |
| 202 | Le | Belville Mining Co., Inc. |
| 204 | Mg | Ted Mesmer & Sons, Inc. |
| 205 | Mg | Thompson Bros. Mining Co. |
| 211 | Mg | East Fairfield Coal Co. |
| 212 | Ms | Southern Ohio Coal Co. |
| 213 | Ms | Southern Ohio Coal Co. |
| 215 | Me | Quarto Mining Co. (Subsidiary of Consolidation Coal Co.) |
| 217 | Mum | King Quarries, Inc. |
| 228 | Mum, Ne | Central Ohio Coal Co. |
| 230 | Ne | B & N Coal, Inc. |
| 231 | Ne | B & N Coal, Inc. |
| 234 | Ne | R & F Coal Co. |
| 235 | Py | Peabody Coal Co. |
| 236 | Py | Peabody Coal Co. |
| 239 | Py | Crooksville Coal Co., Inc. |
| 246 | Sk | ENZ, Inc. |
| 248 | Sk | Kohl Industries |
| 250 | Sk | Hillcrest Coal, Ltd. |
| 251 | Sk | Horizon Coal Corp. |
| 252 | Sk | K & R Mining, Inc. |
| 254 | Sk | Horizon Coal Corp. |
| 255 | Sk | East Ohio Limestone Co. |
| 256 | Ts | Empire Coal Co. |
| 257 | Ts | Zoar Mining Co. |
| 258 | Ts | Zoar Mining Co. |
| 259 | Ts | Eberhart Coal, Inc. |
| 262 | Ts | Kimble Clay & Limestone Co. |
| 264 | Ts | L & M Mineral Co. |
| 267 | Ts | L & M Mineral Co. |
| 268 | Ts | Puskarich Mining, Inc. |
| 269 | Ts | Red Malcuit, Inc. |
| 274 | Ts | Daron Coal Co., Inc. |
| 275 | Ts | R. & E. Coal Co. |
| 276 | Ts | L & M Mineral Co. |
| 279 | Ts | J D Mining, Inc. |
| 280 | Ts | Horizon Coal Corp. |
| 290 | Ts | Horizon Coal Corp. |
| 291 | Ts | Empire Coal Co. |
| 292 | Ts | Empire Coal Co. |
| 294 | Vn | R. A. Eberts Co., Inc. |
| 295 | Vn | R & S Coal Co., Inc. |
| 298 | Vn | B. & D. Coal, Inc. |
| 299 | Vn | Sands Hill Coal Co., Inc. |
| 300 | Vn | Southern Ohio Coal Co. |
| 301 | Vn | Quality Coal Co. |
| 303 | Wn | B & N Coal, Inc. |
| 304 | Wn | B & N Coal, Inc. |
| 308 | Bt | R & F Coal Co. |
| 309 | Bt | Cravat Coal Co. |
| 311 | Bt | Bannock Coal Co. |
| 312 | Bt | R & F Coal Co. |
| 313 | Bt | R & F Coal Co. |
| 314 | Bt, Gy | R & F Coal Co. |
| 321 | Ca | Blum Coal Co. |
| 322 | Ca | East Fairfield Coal Co. |
| 323 | Gy | R. T. G., Inc. |
| 325 | Hn | R & F Coal Co. |
| 326 | Hn | Huberta Coal Co. |
| 327 | Hn | R & F Coal Co. |
| 330 | Hg | David Boyle, Inc. |
| 333 | Hs | Miller Mining, Inc. |
| 336 | Jfn | R & F Coal Co. |
| 337 | Jfn | Ohio Coal & Construction Corp. |
| 339 | Py | Dennis Clay Co. |

**COAL—Continued**

| *County* | *Name of operator* |
|---|---|
| Sk | K & R Mining, Inc. |
| Ts | Miller Mining, Inc. |
| Ts | Cravat Coal Co. |
| Ts | R & F Coal Co. |
| Ts | Miller Mining, Inc. |
| Ts | C. K. & K., Inc. |
| Ts | R & F Coal Co. |
| Ts | Valley Mining, Inc. |
| Vn | Benedict, Inc. |
| Vn | Quality Coal Co. |
| Cl | Regal Mining, Inc. |
| Ca | Johnson Mining Co. |
| Sk | Holmes Limestone Co. |
| Py | Star Mining Co., Inc. |
| Sk | Buckeye-Industrial Mining Co. |
| Ca | K D Coal Co., Inc. |
| Bt | Ohio Coal & Construction Corp. |
| Ca | Lisbon Coal Crushers, Inc. |
| Ts | R & F Coal Co. |
| Ts | Vic Mining, Inc. |
| Jkn | Quality Coal Co. |
| As | Avis Coal Co. |
| Bt | R & F Coal Co. |
| Bt | Ohio Coal & Construction Corp. |
| Bt | Joyce Coal Co., Inc. |
| Bt | R & F Coal Co. |
| Bt | R & F Coal Co. |
| Bt | Ohio River Collieries, Inc. |
| Ca | Beaver Creek, Inc. |
| Ca | Churchill Enterprises, Inc. |
| Ca | Jeffco Sales & Mining Co. |
| Ca | Coalbrook Mining, Inc. |
| Cn | R & F Coal Co. |
| Hn | R & F Coal Co. |
| Jfn | Ohio Coal & Construction Corp. |
| Jfn | R & F Coal Co. |
| Ts | Eberhart Coal, Inc. |
| Mum | Sands Mining Corp. |
| Hn | T.P. Mining, Inc. |
| Sk | Buckeye-Industrial Mining Co. |
| Sk | Wilmot Mining Co. |
| Ts | Empire Coal Co. |
| Ts | Mudsock Minerals, Inc. |
| Ts | L & M Mineral Co. |
| Ts | Kimble Clay & Limestone Co. |
| Ts | Miller Mining, Inc. |
| Ts | Kimble Clay & Limestone Co. |
| Ts | Kimble Clay & Limestone Co. |
| Ts | Valley Mining, Inc. |
| Vn | Green & Son Coal Co. |
| Vn | Benedict, Inc. |
| Vn | Benedict, Inc. |
| Vn | Stewart Construction Co. |
| Vn | Benedict, Inc. |
| Bt | Marietta Coal Co. |
| Ts | Eberhart Coal, Inc. |
| Hs | Miller Mining, Inc. |
| Cl | Carl Noble & Son, Inc. |
| Py | Sand Ridge Coal Co. |
| Bt | Cravat Coal Co. |
| Hn | Cravat Coal Co. |
| Ca | Center Mining Co. |
| Ts | Daron Coal Co., Inc. |
| Ts | C. K. & K., Inc. |
| Ca | Buckeye-Industrial Mining Co. |
| Ca | Commercial Minerals, Inc. |
| Cl | Johnson Mining Co. |
| Ca | D. & D. Mining Co. |
| Cn | R & F Coal Co. |
| Hn | R & F Coal Co. |
| Cn | R & R Minerals, Inc. |
| Cn | G & M Mineral Co. |
| Cl | Buckeye-Industrial Mining Co. |
| 447 | Cl | Buckeye-Industrial Mining Co. |
| 448 | Ca | Buckeye-Industrial Mining Co. |
| 450 | Bt | Marietta Coal Co. |
| 451 | Bt | R & F Coal Co. |
| 452 | Bt | Marietta Coal Co. |
| 453 | Bt | R & F Coal Co. |
| 454 | Bt | Joyce Coal Co., Inc. |
| 455 | Bt | R & F Coal Co. |
| 456 | Bt | R & F Coal Co. |
| 457 | Bt | R & F Coal Co. |
| 458 | Bt | R & F Coal Co. |
| 459 | Bt | Ohio Coal & Construction Corp. |
| 460 | Bt | R & F Coal Co. |
| 461 | Bt | Marietta Coal Co. |
| 462 | Cl | Wardell Coal Co. |
| 463 | Cl | Regal Mining, Inc. |
| 464 | Cl | Myers Mining |
| 465 | Cl | Myers Mining |
| 466 | Cl | Buckeye-Industrial Mining Co. |
| 467 | Cl | Buckeye-Industrial Mining Co. |
| 468 | Cl | Horizon Coal Corp. |
| 469 | Ca | Lisbon Coal Crushers, Inc. |
| 470 | Ca | Blum Coal Co. |
| 471 | Ca | Blum Coal Co. |
| 472 | Ca | Commercial Minerals, Inc. |
| 473 | Ca | John Glenn Mining |
| 474 | Ca | Buckeye-Industrial Mining Co. |
| 475 | Ca | East Fairfield Coal Co. |
| 476 | Ca | Amerikohl Mining, Inc. |
| 477 | Cn | R & F Coal Co. |
| 478 | Cn | Sugarcreek Clay & Limestone, Inc. |
| 479 | Cn | Miller Mining, Inc. |
| 480 | Hn | Cravat Coal Co. |
| 481 | Hn | R & F Coal Co. |
| 482 | Hn | R & F Coal Co. |
| 483 | Hg | Hocking Valley Mining |
| 484 | Hg | Tri-State Coal Sales, Inc. |
| 485 | Hs | Holmes Limestone Co. |
| 486 | Hs | Miller Mining, Inc. |
| 487 | Hs | Sugarcreek Clay & Limestone, Inc. |
| 488 | Jkn | Royal Oak Industries, Inc. |
| 489 | Jfn | Valley Mining, Inc. |
| 490 | Le | Shope Mining |
| 491 | Le | Belville Mining Co., Inc. |
| 492 | Mum | Black Rock, Ltd. |
| 493 | Ne | B & N Coal, Inc. |
| 494 | Ne | B & N Coal, Inc. |
| 495 | Ne | B & N Coal, Inc. |
| 496 | Py | Tri-State Coal Sales, Inc. |
| 497 | Py | A. I. R. Construction & Reclamation, Inc. |
| 498 | Sk | Wilmot Mining Co. |
| 499 | Ts | Miller Mining, Inc. |
| 500 | Ts | Sugarcreek Clay & Limestone, Inc. |
| 501 | Ts | Horizon Coal Corp. |
| 502 | Ts | Holmes Limestone Co. |
| 503 | Ts | Eberhart Coal, Inc. |
| 504 | Ts | Valley Mining, Inc. |
| 505 | Ts | J D Mining, Inc. |
| 506 | Ts | Miller Mining, Inc. |
| 507 | Ts | R & F Coal Co. |
| 508 | Ts | R & F Coal Co. |
| 509 | Ts | Kimble Clay & Limestone Co. |
| 510 | Ts | Red Malcuit, Inc. |
| 511 | Vn | Quality Coal Co. |
| 512 | Vn | McArthur Lumber & Post Co., Inc. |
| 513 | Vn | Sands Hill Coal Co., Inc. |
| 514 | Wn | B & N Coal, Inc. |

**LIMESTONE/DOLOMITE** ■

| *Map location number* | *County* | *Name of operator* |
|---|---|---|
| 1 | Ads | Davon, Inc. |
| 2 | Ads | Standard Slag Co. |
| 3 | An | Bluffton Stone Co. |
| 4 | An | National Lime & Stone Co. |
| 5 | An | National Lime & Stone Co. |

## LIMESTONE/DOLOMITE—Continued

| Map location number | County | Name of operator |
|---|---|---|
| 6 | An | National Lime & Stone Co. |
| 7 | An | Suever Stone Co., Inc. |
| 9 | As | Diamond Stone Quarries, Inc., R. A. Eberts Co., Inc. |
| 10 | Ae | Con-Ag, Inc. |
| 11 | Ae | National Lime & Stone Co. |
| 12 | Bt | Ayers Limestone Quarry, Inc. |
| 13 | Bt | Cravat Coal Co. |
| 14 | Bn | Brown County Rock Crusher |
| 15 | Cl | Puskarich Limestone Co. |
| 16 | Ck | American Aggregates Corp. |
| 17 | Cln | Melvin Stone Co. |
| 18 | Cd | National Lime & Stone Co. |
| 19 | Dke | American Aggregates Corp. |
| 20 | Del | American Aggregates Corp. |
| 21 | Del | National Lime & Stone Co. |
| 22 | Del | Owens Stone Co., Inc. |
| 23 | Del | Penry Stone Co. |
| 24 | Ee | Erie Blacktop, Inc. |
| 25 | Ee | Rogers Group, Inc. (dba Sandusky Crushed Stone Co.) |
| 26 | Ee | Wagner Quarries Co. |
| 27 | Fe | American Aggregates Corp. |
| 28 | Fe | Melvin Stone Co. |
| 30 | Fn | American Aggregates Corp. |
| 31 | Fn | American Aggregates Corp. |
| 32 | Ge | American Aggregates Corp. |
| 33 | Ck, Ge | Southwestern Portland Cement Co. |
| 34 | Ge | Southwestern Portland Cement Co. |
| 35 | Hk | National Lime & Stone Co. |
| 36 | Hk | Pifer Stone Co. |
| 37 | Hk | Tarbox-McCall Stone Co. (Division of Hancock Ready Mix, Inc.) |
| 38 | Hdn | Hardin Quarry Co., Inc. |
| 41 | Hd | Davon, Inc. |
| 42 | Hd | Ohio Asphaltic Limestone Corp. |
| 43 | Hd | Marshall Quarry, Inc. |
| 44 | Hs | Holmes Limestone Co. |
| 45 | Hs, We | Holmes Limestone Co. |
| 46 | Jkn | D & J Energy, Inc. |
| 47 | Jkn | Waterloo Coal Co., Inc. |
| 49 | Lgn | Connolly Construction Co., Inc. |
| 50 | Lgn | C. E. Duff & Son, Inc. |
| 51 | Lgn | Northwood Stone & Asphalt Co. |
| 52 | Ls | The France Stone Co. |
| 53 | Ls | The France Stone Co. |
| 54 | Ls | Stoneco |
| 55 | Mg | Heiser Stone Co. |
| 56 | Mg | Honey Creek Stone Co. |
| 57 | Mg | U.S. Cement, Inc. |
| 59 | Mn | J. M. Hamilton & Sons Co., Inc. |
| 60 | Mn | National Lime & Stone Co. |
| 61 | Mn | Tri-County Limestone Co. |
| 62 | Mr | John W. Karch Stone Co., Stoneco |
| 63 | Mr | S & S Aggregate, Inc. |
| 64 | Mi | Armco, Inc. |
| 65 | Mi | Gregory Stone Co., Inc. |
| 66 | Mi | Ludlow Stone, Inc. |
| 67 | Mi | C. F. Poeppelman, Inc. |
| 69 | Me | Christman Quarry |
| 70 | My | American Aggregates Corp. |
| 71 | My | American Aggregates Corp. |
| 72 | My | Southwestern Portland Cement Co. |
| 73 | Mon | Central Ohio Coal Co. |
| 75 | Mum | Chesterhill Stone Co. |
| 76 | Mum | Columbia Portland Cement Corp. |
| 78 | Mum | Sidwell Bros., Inc. |
| 79 | Ne | King Limestone, Inc. |
| 82 | Oa | Edward Kraemer & Sons, Inc. |
| 83 | Oa | Stoneco |
| 84 | Oa | Standard Slag Co. |
| 85 | Oa | U.S. Gypsum Co. |
| 86 | Pg | The France Stone Co. |
| 87 | Pg | Lafarge Corp. |
| 88 | Pg | Stoneco |
| 89 | Py | Maxville Quarries, Inc. |
| 91 | Pke | Latham Limestone, Inc. |
| 92 | Pky | Melvin Stone Co. |
| 95 | Pre | Wysong Stone Co. |
| 98 | Pm | Putnam Stone Co. |
| 100 | Sy | The France Stone Co. |
| 101 | Sy | Gottron Bros. Co. |
| 102 | Sy | Martin Marietta Chemicals |
| 103 | Sy | Steetley Resources, Inc. |
| 104 | Sy | Steetley Resources, Inc. |
| 106 | Sa | Maple Grove Stone Co. |
| 107 | Sa | The France Stone Co. |
| 108 | Sa | The France Stone Co. |
| 109 | Sa | North Shore Stone Quarries, Inc. |
| 110 | Shy | Miami River Stone Co. |
| 111 | Shy | Sidney Sand & Gravel Co. |
| 112 | Shy | Spring Creek Corp. |
| 113 | Sk | East Ohio Limestone Co. |
| 114 | Sk | Kohl Industries |
| 115 | Sk | SME Cement, Inc. |
| 117 | Ts | Kimble Clay & Limestone Co. |
| 118 | Ts | Sugarcreek Clay & Limestone, Inc. |
| 119 | Un | L. G. Rockhold & Sons, Inc. |
| 120 | Un | Union Aggregates Co. |
| 121 | Vt | Stoneco |
| 122 | Vt | Ridge Township Quarry |
| 123 | Vt | Suever Stone Co., Inc. |
| 124 | Vn | G & M Supply, Inc. (dba Clinton Stone, Inc.) |
| 125 | Wan | American Aggregates Corp. |
| 128 | Wd | The France Stone Co. |
| 129 | Wd | The France Stone Co. |
| 130 | Wd | MacRitchie Materials, Inc. |
| 131 | Wd | Stoneco |
| 132 | Wd | Stoneco |
| 133 | Wt | McCarthy Stone Quarry |
| 134 | Wt | National Lime & Stone Co. |
| 135 | Wt | Wyandot Dolomite, Inc. |
| 136 | Ts | Fuhrer Farms & Mining |
| 138 | Ne | Central Ohio Coal Co. |
| 140 | Le | Belville Mining Co., Inc. |
| 141 | Mum | Central Ohio Coal Co. |
| 142 | Ge | American Aggregates Corp. |
| 143 | My | American Aggregates Corp. |
| 144 | Mum | Salt Creek Materials, Inc. |

## SAND AND GRAVEL DREDGING OPERATION ▲

| Map location number | Name of operator |
|---|---|
| 1 | Erie Sand & Steamship Co. |
| 2 | Osborne Materials Co. |
| 3 | White Bros. Sand, Inc. |

## SAND AND GRAVEL ▲

| Map location number | County | Name of operator |
|---|---|---|
| 2 | An | Ward Materials, Inc. |
| 5 | Ald | Alvin Keiffer Trucking & Excavating |
| 6 | Ald | Ries Sand & Gravel |
| 8 | Ald | Young's Sand & Gravel Co. |
| 9 | Asa | Frye Sand & Gravel, Inc. |
| 10 | Asa | Janson Soil Service, Inc. |
| 11 | Asa | Kinsman Sand & Gravel Co. |
| 13 | Asa | Nelson Sand & Gravel, Inc. |
| 14 | Asa | Nelson Sand & Gravel, Inc. |
| 15 | Asa | R. W. Sidley, Inc. |
| 18 | As | Athens Building Materials Co. |
| 19 | As | Black Top Contracting, Inc. |
| 21 | As | Lake Hope Asphalt, Inc. |
| 23 | Ae | Joseph Sand & Gravel |
| 24 | Ae | National Lime & Stone Co. |
| 25 | Ae | Quality Ready Mix, Inc. |
| 26 | Bt | Tri-State Asphalt Productions |

**SAND AND GRAVEL—Continued**

| *Map location number* | *County* | *Name of operator* |
|---|---|---|
| 28 | Br | V. I. P. Contractors, Inc. |
| 29 | Br | Aggregate Services, Inc., American Aggregates Corp. |
| 30 | Br | American Aggregates Corp. |
| 31 | Br | Broshear Contractors, Inc. |
| 32 | Br | Dingledine Trucking Service |
| 33 | Br | Dravo Basic Materials Co., Inc. |
| 34 | Br | Dravo Basic Materials Co., Inc. |
| 36 | Br | Fairfield Ready Mix |
| 37 | Br | Indian Creek Sand & Gravel Co. |
| 38 | Br | Martin Farms, Inc. |
| 39 | Br | Mecco, Inc. |
| 40 | Br | Middletown Sand & Gravel Co. |
| 41 | Br | Weidle Sand & Gravel, Inc. |
| 42 | Br | New Miami Sand & Gravel, Inc. |
| 44 | Br | Watson Gravel, Inc. |
| 45 | Br | Welch Sand & Gravel, Inc. |
| 47 | Cl | Oneida Sand & Gravel, Inc. |
| 48 | Cpn | American Aggregates Corp. |
| 49 | Cpn | D & W Sand & Gravel |
| 50 | Cpn | Mechanicsburg Sand & Gravel, Inc. |
| 51 | Cpn | Moore's Excavating Co. |
| 52 | Ck | American Aggregates Corp. |
| 53 | Ck | County Line Sand & Gravel |
| 54 | Ck | Demmy Sand & Gravel |
| 57 | Ck | Hilltop Basic Resources, Inc. (dba Enon Washed Sand & Gravel Co.) |
| 58 | Ck | Springfield Sand & Gravel Co. |
| 59 | Ct | Barrett Paving Materials, Inc. |
| 61 | Ct | Kipp's Gravel Co., Inc. |
| 63 | Cln | The Gravel Co. |
| 64 | Ca | Beaver Creek, Inc. |
| 67 | Ca | Neiheisel Sand & Gravel |
| 68 | Ca | X L Sand & Gravel |
| 69 | Cn | Apache Aggregate & Paving Co. |
| 70 | Cn | Apache Aggregate & Paving Co. |
| 71 | Cn | Boyd Gravel Co. |
| 72 | Cn | Spring Industries, Inc. |
| 75 | Cd | Gibson Sand & Gravel Co. |
| 80 | Dke | Foureman's Sand & Gravel, Inc. |
| 81 | Dke | Tom Hollinger Excavating |
| 82 | De | Hillsdale Sand & Gravel, Inc. |
| 83 | Ee | Elmer Borchardt, Inc. |
| 84 | Ee | Jarrett Sand Co. |
| 85 | Ee | Keener Sand & Clay Co. |
| 86 | Ee | Mesenburg Bros., Inc. |
| 87 | Ee | Miller Sand Co. |
| 91 | Fd | Davis Sand & Gravel |
| 92 | Fd | Lancaster Sand & Gravel Co. |
| 94 | Fn | Agg Rok Materials (Division of Wapak Sand & Gravel Co.) |
| 95 | Fn | American Aggregates Corp. |
| 96 | Fn | American Aggregates Corp. |
| 97 | Fn | Big Walnut Sand & Gravel Co. |
| 98 | Fn | J. P. Sand & Gravel Co. |
| 99 | Fn | L. & M. Excavators, Inc. |
| 100 | Fn | Masons Sand & Gravel Co. |
| 101 | Fn | Muskingum River Gravel Co. |
| 102 | Fn | Olen Corp. |
| 105 | Ga | M. T. Epling Co. |
| 106 | Ga | M. T. Epling Co. |
| 107 | Ga | Keener Sand & Clay Co. |
| 108 | Gea | Haueter Sand & Gravel, Inc. |
| 109 | Gea | Teague Gravel Co., Inc. |
| 110 | Ge | American Aggregates Corp. |
| 112 | Ck, Ge | Hilltop Basic Resources, Inc. |
| 115 | Ge | Phillips Sand & Gravel |
| 117 | Ge | Xenia Sand, Gravel, & Asphalt Co. |
| 118 | Hmn | American Aggregates Corp. |
| 119 | Hmn | American Aggregates Corp. |
| 120 | Hmn | Ashcraft Sand & Gravel |
| 121 | Hmn | Barrett Paving Materials, Inc. |
| 123 | Hmn | James Bunnell, Inc. |
| 124 | Hmn | James Bunnell, Inc. |
| 126 | Hmn | Dravo Basic Materials Co., Inc. |
| 127 | Hmn | Dravo Basic Materials Co., Inc. |
| 128 | Hmn | Dravo Basic Materials Co., Inc. |
| 131 | Hmn | Dravo Basic Materials Co., Inc. |
| 133 | Hmn | Dingledine Trucking Service |
| 135 | Hmn | Harrison Sand & Gravel Co. |
| 139 | Hmn | Rack Sand, Inc. |
| 141 | Hmn | Three Rivers Sand & Gravel, Inc. |
| 142 | Hmn | Watson Gravel, Inc. |
| 143 | Hmn | Welch Sand & Gravel, Inc. |
| 144 | Hmn | Welch Sand & Gravel, Inc. |
| 147 | Hy | Gerken Materials, Inc. |
| 150 | Hg | Hocking County Engineer |
| 151 | Hg | Hocking Valley Concrete, Inc. |
| 152 | Hg | S & S Aggregate |
| 153 | Hs | Menuez Bros. Sand & Gravel Co. |
| 154 | Hs | Feikert Sand & Gravel, Inc. |
| 157 | Hrn | Price Sand & Gravel (Division of Price Asphalt & Paving Co.) |
| 159 | Kx | Fredericktown Sand & Gravel Co. |
| 160 | Kx | Goodwin Sand & Gravel, Inc. |
| 161 | Kx | Olen Corp. |
| 162 | Kx | Mickley Gravel Co. |
| 163 | Kx | Purdy Sand & Gravel Co. |
| 164 | Kx | Small's Sand & Gravel, Inc. |
| 165 | Kx | Small's Sand & Gravel, Inc. |
| 166 | Lke | R. W. Sidley, Inc. |
| 167 | Le | Becky Lane Trucking, Inc. |
| 170 | Le | Burlington Sand & Gravel Co. |
| 173 | Lg | Newark Asphalt Co. |
| 174 | Lg | American Aggregates Corp. |
| 176 | Lg | Dry Creek Gravel Co. |
| 177 | Lg | Dry Creek Gravel Co. |
| 179 | Lg | Van Wey Sand & Gravel, Inc. |
| 180 | Lg | Walter's Gravel |
| 181 | Lg | York Road Gravel Co. |
| 182 | Lgn | C. E. Duff & Son, Inc. |
| 183 | Lgn | C. E. Duff & Son, Inc. |
| 189 | Lgn | Neer's Sand & Gravel |
| 190 | Lgn | Cummins Family Contracting |
| 191 | Ln | Belu & Son Paving, Inc. |
| 193 | Ls | Maumee Haulers, Inc., Sandman Sand & Stone, Inc. |
| 195 | Ls | Seaway Sand & Stone, Inc. |
| 196 | Mg | Neiheisel Sand & Gravel |
| 197 | Mn | Fleming Construction Co., Inc. |
| 198 | Mn | Penry Stone Co. |
| 200 | Mn | Union Aggregates Co. |
| 201 | Mn | Union Aggregates Co. |
| 202 | Ma | Baker Sand, Inc. |
| 203 | Ma | Baker Sand, Inc. |
| 205 | Ma | Ramsier Sand & Gravel |
| 206 | Ma | Seville Sand & Gravel, Inc. |
| 207 | Ma | Seville Sand & Gravel, Inc. |
| 208 | Ma | Silchuk Gravel Co. |
| 209 | Ms | Dravo Basic Materials Co., Inc. |
| 210 | Ms | Humphrey Farms |
| 211 | Ms | Meigs County Commissioners |
| 212 | Ms | Richards & Son, Inc. |
| 215 | Mi | Eldean Gravel Co., American Aggregates Corp. |
| 216 | Mi | Ernst Gravel Co., American Aggregates Corp. |
| 217 | Mi | New Carlisle Sand & Gravel Co. |
| 219 | Mi | Troy Gravel Co., American Aggregates Corp. |
| 220 | Mi | Valley Gravel Co.,American Aggregates Corp. |
| 221 | Mi | Wise Gravel |
| 222 | Mi | Fenner Sand & Gravel, Inc. |
| 223 | My | American Aggregates corp. |
| 224 | My | American Aggregates Corp. |
| 225 | My | Broadway Sand & Gravel, Inc. |
| 228 | My | Carpenter's Excavating |
| 229 | My | H & H Utilities Co. |
| 232 | My | Hilltop Basic Resources, Inc. |
| 233 | My | Miller Bros. Gravel, Inc. |
| 235 | My | Northmont Sand & Gravel Co. |
| 236 | My | Partin Sand & Gravel |
| 238 | My | Tipp Stone, Inc. |
| 239 | My | Weidle Sand & Gravel, Inc. |

## SAND AND GRAVEL—Continued

| *Map location number* | *County* | *Name of operator* |
|---|---|---|
| 240 | Mon | Chesterhill Stone Co. |
| 241 | Mon | Huck Farms |
| 242 | Mw | Chesterville Sand & Gravel Co., Inc. |
| 243 | Mum | Cox Gravel, Inc. |
| 244 | Mum | Cox Gravel, Inc. |
| 245 | Mum | Muskingum River Gravel Co. |
| 247 | Mum | Muskingum River Gravel Co. |
| 248 | Mum | Salt Creek Materials, Inc. |
| 249 | Mum | Salt Creek Materials, Inc. |
| 251 | Pky | American Aggregates Corp. |
| 252 | Pke | Valley Materials Co. |
| 253 | Pke | Chattin Concrete |
| 254 | Pke | Gregory Materials Co. |
| 255 | Pke | Standard Slag Co. |
| 256 | Pe | Beck Sand & Gravel, Inc. |
| 257 | Pe | Karl Brugmann Sand & Gravel, Inc. |
| 258 | Pe | Oscar Brugmann Sand & Gravel, Inc. |
| 259 | Pe | Charlestown Sand & Gravel |
| 260 | Pe | Aurora Sand & Gravel Co. |
| 261 | Pe | R. A. Cruise Sand & Gravel, Inc. |
| 262 | Pe | Hilltop Aggregate, Inc. |
| 264 | Pe | Hugo Sand Co. |
| 265 | Pe | Jefferson Materials Co. |
| 266 | Pe | Karg Sand & Gravel Co. |
| 268 | Pe | Lakeside Sand & Gravel Co. |
| 269 | Pe | Lappin's Farm |
| 270 | Pe | W. G. Lockhart & Sons |
| 272 | Pe | Miller Sand & Gravel Co. |
| 273 | Pe | Northern Ohio Materials, Inc. |
| 274 | Pe | Schloss Paving Co. |
| 275 | Pe | Sober Sand & Gravel Co. |
| 276 | Pe | Solon Excavators Sand & Gravel, Inc. |
| 277 | Pe | Standard Slag Co. |
| 278 | Pe | Standard Slag Co. |
| 280 | Pe | Terra Vista Sand & Gravel Co. |
| 281 | Pe | S & S Aggregate |
| 282 | Pe | S & S Aggregate |
| 284 | Pre | Southern Ohio Aggregates |
| 285 | Pre | Wysong Gravel Co. |
| 286 | Pre | Wysong Gravel Co. |
| 287 | Rd | D. H. Bowman & Sons, Inc. |
| 289 | Rd | Ganges Gravel |
| 290 | Rd | John L. Garber Materials, Inc. |
| 292 | Rd | Mohican Sand & Gravel, Inc. |
| 293 | Rs | Three Locks Construction Co. |
| 297 | Rs | Elm Spring Farm |
| 298 | Rs | Haubeil & Sons Asphalt & Materials, Inc. |
| 304 | So | Cunningham Asphalt Paving, Inc. |
| 305 | So | Schilling Contractors, Inc. |
| 306 | So | Standard Slag Co. |
| 307 | Sa | Wright Sand |
| 310 | Shy | Fleckenstein Farm Gravel Pit |
| 311 | Shy | Miami River Stone Co. |
| 312 | Shy | Sidney Sand & Gravel Co. |
| 314 | Shy | Spring Creek Corp. |
| 315 | Shy | Spring Creek Corp. |
| 316 | Sk | Allied Corp. |
| 318 | Sk | Canton Aggregate |
| 319 | Sk | Canton Aggregate |
| 320 | Sk | A. J. Diana Sons, Inc. |
| 321 | Sk | Hartville Sand & Gravel, Inc. |
| 322 | Sk | Heiser Sand & Gravel |
| 323 | Sk | Heiser Sand & Gravel |
| 325 | Sk | Massillon Washed Gravel Co. |
| 326 | Sk | Oster Sand & Gravel, Inc. |
| 327 | St | Flesher Sand & Gravel, Inc. |
| 328 | St | Lerkis Asphalt Co., Inc. |
| 330 | St | H. M. Miller Construction Co. |
| 333 | St | Riverside Sand & Gravel Co., Inc. |
| 334 | St | Rubber City Sand & Gravel Co. |
| 335 | St | Spring Valley Investments, Inc. |
| 336 | St | S & S Aggregate |
| 337 | St | S & S Aggregate |
| 338 | St | S & S Aggregate |
| 340 | Asa, Tl | Samco, Inc. |
| 342 | Ts | Oster Sand & Gravel, Inc. |
| 343 | Ts | Soehnlen Bros. Sand & Gravel Co. |
| 344 | Ts | Spring Industries, Inc. |
| 345 | Ts | Spring Industries, Inc. |
| 346 | Ts | Stewart & Reichman, Inc. |
| 347 | Ts | Stocker Sand & Gravel Co. |
| 348 | Ts | Stocker Sand & Gravel Co. |
| 349 | Wan | American Aggregates Corp. |
| 350 | Wan | Bellbrook Gravel Co., American Aggregates Corp. |
| 352 | Wan | Dravo Basic Materials Co., Inc., Carl E. Oeder & Sons Sand & Gravel |
| 356 | Wan | C & S Contractors, Inc. |
| 357 | Wan | L & I Trucking & Construction, Inc. |
| 363 | Wan | Watson Gravel, Inc. |
| 364 | Wn | Beverly Slag Co. |
| 365 | Wn | Briggs Sand & Gravel, Inc. |
| 366 | Wn | Chesterhill Stone Co. |
| 367 | Wn | Muskingum River Gravel Co. |
| 369 | Wn | Trout Sand & Gravel Co. |
| 370 | Wn | Union Slag Corp. |
| 371 | Wn | Union Slag Corp. |
| 372 | We | Prairie Lane Gravel Co. |
| 373 | We | Rupp Construction, Inc. |
| 374 | We | Zollinger Sand & Gravel Co. |
| 375 | Ws | Stoneco |
| 376 | Ws | Stoneco |
| 377 | De, Ws | Weber Sand & Gravel, Inc. |
| 378 | Ws | Dennis Winzeler |
| 379 | Wt | Precision Sand & Gravel |
| 380 | Wt | H & M Sand & Gravel Co., National Lime & Stone Co. |
| 381 | Wt | H & M Sand & Gravel Co., National Lime & Stone Co. |
| 382 | Wt | Kirby's Sand & Gravel, Inc. |
| 384 | St | Portage Lakes Sand & Gravel Co. |
| 385 | Ck | William H. Young |
| 386 | Sk | American Sand & Gravel |
| 387 | Pe | American Sand & Gravel |
| 388 | Le | D & D Sand Bank |
| 389 | Ts | Benco Leasing, Inc. |
| 390 | Mi | Trojan Asphalt, Inc. |
| 391 | Wan | D & L Browning Excavating, Inc. |
| 392 | My | Englewood Sand & Gravel Co., Inc. |
| 393 | Asa | North Ridge Materials |
| 394 | Asa | Joe Simak & Sons Trucking, Inc. |
| 395 | So | Scioto Valley Resources |
| 396 | Mum | Lazy Acre Farms, Inc. |
| 397 | Ts | Heiser Stone Co. |
| 400 | Lg | Dry Creek Gravel Co. |
| 401 | Fd | Paul D. Beery Trucking Co. |
| 403 | Ge | Donald Martin Contracting |
| 404 | Ge | Ernst Aggregates, Inc., American Aggregates Corp. |
| 405 | Ge | American Aggregates Corp. |
| 406 | Hdn | Crates Excavating |
| 407 | Hmn | Whitewater Aggregates, Inc. |
| 408 | Kx | Small's Sand & Gravel, Inc. |
| 409 | Rd | Bolin & Bartley, Inc. |
| 410 | Mum | Luburgh, Inc. |
| 411 | Lgn | Cooper Sand & Gravel |
| 412 | Ald | Young's Sand & Gravel Co. |
| 413 | Asa | North Ridge Materials |
| 414 | Fn | J. D. Rhodes, S & S Aggregate, Inc. |
| 415 | Gea | Soltis Sand & Gravel |
| 416 | Hs | Spring Run Farm & Gravel |
| 417 | Hrn | Erie Blacktop, Inc. |
| 419 | Lg | Gary Roberts Excavating |
| 420 | Lgn | C. E. Duff & Son, Inc. |
| 421 | Ls | Sandman Sand & Stone, Inc. |
| 422 | Ls | Sandman Sand & Stone, Inc. |
| 423 | Mn | Fleming Construction Co., Inc. |
| 424 | Me | B & D Paving, Inc. |
| 425 | Mum | Salt Creek Materials, Inc. |
| 427 | St | R & S, Inc. |
| 428 | Ts | Newton Asphalt |
| 429 | Wan | Ernst Material Service, Inc. |
| 431 | Wan | Carl E. Oeder & Sons Sand & Gravel |
| 432 | Wn | Atlas Towing Co. |
| 434 | Hmn | Barrett Paving Materials, Inc. |
| 435 | Sk | Allied Corp. |

## SANDSTONE/CONGLOMERATE ▲

| *Map location number* | *County* | *Name of operator* |
|---|---|---|
| 1 | Cl | Conotton Valley Quarries Co. |
| 2 | Sk | Kohl Industries |
| 3 | Ca | Beaver Creek, Inc. |
| 4 | Cn | Briar Hill Stone Co. |
| 5 | Cn | Briar Hill Stone Co. |
| 6 | Cn | Briar Hill Stone Co. |
| 7 | Cn | Briar Hill Stone Co. |
| 8 | Cn | Briar Hill Stone Co. |
| 13 | Cya | Boyas Excavating, Inc. |
| 14 | Ee | Cleveland Quarries Co. |
| 16 | Gea | Best Silica Co. |
| 17 | Gea | Best Sand Corp. |
| 18 | Gea | R. W. Sidley, Inc. |
| 19 | Hs | Briar Hill Stone Co. |
| 20 | Hrn | Mesenburg Bros., Inc. |
| 22 | Kx | Briar Hill Stone Co. |
| 23 | Kx | Briar Hill Stone Co. |
| 24 | Kx | Central Silica Co. |
| 27 | Ln | Cleveland Quarries Co. |
| 30 | Mg | Gwin Contracting Co. |
| 31 | Py | Central Silica Co. |
| 34 | Rs | Southern Silica, Inc. |
| 35 | So | Taylor Stone Co., Inc. |
| 36 | So | Waller Bros. Stone Co. |
| 37 | So | Waller Bros. Stone Co. |
| 38 | So | Waller Bros. Stone Co. |
| 40 | Tl | Hard Rocks, Inc. |
| 41 | Ts | Kimble Clay & Limestone Co. |
| 42 | Ts | U.S. Silica Co. |
| 43 | Wn | Alan Stone Co., Inc. |
| 44 | Cn | Briar Hill Stone Co. |
| 45 | Pke | Schrader Sand & Gravel |
| 46 | Cn | Briar Hill Stone Co. |

## SHALE/CLAY ◘

| *Map location number* | *County* | *Name of operator* |
|---|---|---|
| 1 | Ald | London Tile Co. |
| 2 | Ae | Sandkuhl Tile Co. |
| 4 | Ca | Ferris Coal Co., Inc. |
| 5 | Ca | Summitville Tiles, Inc. |
| 6 | Cn | General Clay Products Corp. |
| 7 | Cya | Hydraulic Press Brick Co. |
| 9 | Fn | Claycraft Co. |
| 10 | Ge | Southwestern Portland Cement Co. |
| 11 | Hn | Bowerston Shale Co. |
| 12 | Hg | General Clay Products Corp. |
| 17 | Hs | Clark Clay Co. |
| 18 | Hs | General Clay Products Corp. |
| 19 | Hs | Holmes Limestone Co. |
| 21 | Jkn | Cedar Heights Clay Co. |
| 22 | Jkn | Cedar Heights Clay Co. |
| 23 | Jkn | Waterloo Coal Co., Inc. |
| 24 | Le | American Olean Tile Co. |
| 25 | Le | Belville Mining Co., Inc. |
| 30 | Le | Lone Star Marquette |
| 31 | Lg | Bowerston Shale Co. |
| 34 | Mg | U.S. Cement, Inc. |
| 35 | Mg | Thompson Bros. Mining Co. |
| 36 | Mn | Glen-Gery Corp. |
| 37 | Ma | General Clay Products Corp. |
| 38 | Mum | Bowerston Shale Co. |
| 39 | Mum | Columbia Portland Cement Corp. |
| 41 | Ne | Towne Square Products |
| 42 | Pg | Lafarge Corp. |
| 43 | Py | Dennis Clay Co. |
| 45 | Py | Charles Kishler |
| 46 | Py | Ludowici-Celadon Co. |
| 47 | Py | Nutter Bros. Coal Co., Inc. |
| 48 | Pm | Miller Bros. Clay Works, Inc. |
| 52 | Sk | East Ohio Limestone Co. |
| 53 | Sk | Kohl Industries |
| 56 | Ts | Belden Brick Co. |
| 57 | Ts | Belden Brick Co. |
| 58 | Ts | Belden Brick Co. |
| 59 | Ts | Belden Brick Co. |
| 60 | Ts | Belden Brick Co. |
| 63 | Ts | Kimble Clay & Limestone Co. |
| 64 | Ts | L & M Mineral Co. |
| 65 | Ts | L & M Mineral Co. |
| 66 | Ts | L & M Mineral Co. |
| 67 | Ts | Stone Creek Brick Co. |
| 69 | Ts | Sugarcreek Clay & Limestone Co. |
| 70 | Ts | Zoar Mining Co. |
| 71 | Ts | Zoar Mining Co. |
| 73 | Wt | Claycraft Co. |
| 74 | Mum | Dennis Clay Co. |
| 75 | Py | Dennis Clay Co. |
| 76 | Sk | Holmes Limestone Co. |
| 77 | Ts | L & M Mineral Co. |
| 78 | Ts | Eberhart Coal, Inc. |
| 79 | Ca | Dome Minerals, Inc. |
| 80 | Le | Belville Mining Co., Inc. |

## GYPSUM ◆

| *Map location number* | *County* | *Name of operator* |
|---|---|---|
| 1 | Oa | Celotex Corp. |

## SALT ◘ ◘

| *Map location number* | *County* | *Name of operator* |
|---|---|---|
| 1 | Cya | International Salt Co. |
| 2 | Lke | Morton Thiokol, Inc. |
| 3 | Lg | R. H. Penick Co. |
| 4 | St | Diamond Crystal Salt Co., International Salt Co. |
| 5 | We | Morton Thiokol, Inc. |

## PEAT ◇

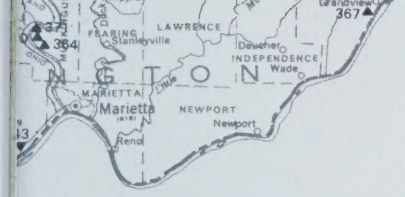
| *Map location number* | *County* | *Name of operator* |
|---|---|---|
| 1 | Ald | Mohican Organic Products, Inc. |
| 2 | Cpn | Sphagnum Moss Peat Farm |
| 3 | Lgn | Weaver's Peat Co. |
| 4 | Ws | Lingvai Peat Co. |
| 6 | Rd | Dan Jacobs |

## COAL-PREPARATION PLANTS ◐

| *Map location number* | *County* | *Name of operator* |
|---|---|---|
| 1 | Bt | R & F Coal Co. |
| 2 | Bt | Saginaw Mining Co. |
| 3 | Bt | Marietta Coal Co. |
| 4 | Bt | Ohio Valley Coal Co. |
| 5 | Ca | Buckeye-Industrial Mining Co. |
| 6 | Ca | C & E Coal, Inc. |
| 7 | Cn | Conesville Coal Preparation Co. |
| 8 | Hn | Consolidation Coal Co. |
| 9 | Jkn | Sands Hill Coal Co., Inc. |
| 10 | Jkn | Waterloo Coal Co., Inc. |
| 11 | Jfn | Route Forty-Three Washer |
| 12 | Jfn | Ohio Coal & Construction Corp. |
| 13 | Mg | East Fairfield Coal Co. |
| 14 | Ms | Southern Ohio Coal Co. |
| 15 | Me | Quarto Mining Co. (subsidiary of Consolidation Coal Co.) |
| 16 | Mn | Central Ohio Coal Co. |
| 17 | Py | Peabody Coal Co. |
| 18 | Py | Crooksville Coal Co., Inc. |
| 19 | Ts | Empire Coal Co. |
| 20 | Ts | Central Fuel Co. |
| 21 | Ts | Horizon Coal Corp. |
| 22 | Vn | Benedict, Inc. |
| 23 | Vn | Jaymar Coal Prep, Inc. |
| 24 | Vn | Sands Hill Coal Co., Inc. |
| 25 | Vn | Southern Ohio Coal Co. |
| 26 | Bt | Cravat Coal Co. |
| 27 | We | Holmes Limestone Co. |
| 28 | Mum | Sands Mining Corp. |

## OHIO COUNTY ABBREVIATIONS

| *County* | *Abbreviation* | *County* | *Abbreviation* | *County* | *Abbreviation* |
|---|---|---|---|---|---|
| Adams | Ads | Hamilton | Hmn | Noble | Ne |
| Allen | An | Hancock | Hk | Ottawa | Oa |
| Ashland | Ald | Hardin | Hdn | Paulding | Pg |
| Ashtabula | Asa | Harrison | Hn | Perry | Py |
| Athens | As | Henry | Hy | Pickaway | Pky |
| Auglaize | Ae | Highland | Hd | Pike | Pke |
| Belmont | Bt | Hocking | Hg | Portage | Pe |
| Brown | Bn | Holmes | Hs | Preble | Pre |
| Butler | Br | Huron | Hrn | Putnam | Pm |
| Carroll | Cl | Jackson | Jkn | Richland | Rd |
| Champaign | Cpn | Jefferson | Jfn | Ross | Rs |
| Clark | Ck | Knox | Kx | Sandusky | Sy |
| Clermont | Ct | Lake | Lke | Scioto | So |
| Clinton | Cln | Lawrence | Le | Seneca | Sa |
| Columbiana | Ca | Licking | Lg | Shelby | Shy |
| Coshocton | Cn | Logan | Lgn | Stark | Sk |
| Crawford | Cd | Lorain | Ln | Summit | St |
| Cuyahoga | Cya | Lucas | Ls | Trumbull | Tl |
| Darke | Dke | Madison | Mdn | Tuscarawas | Ts |
| Defiance | De | Mahoning | Mg | Union | Un |
| Delaware | Del | Marion | Mn | Van Wert | Vt |
| Erie | Ee | Medina | Ma | Vinton | Vn |
| Fairfield | Fd | Meigs | Ms | Warren | Wan |
| Fayette | Fe | Mercer | Mr | Washington | Wn |
| Franklin | Fn | Miami | Mi | Wayne | We |
| Fulton | Ftn | Monroe | Me | Williams | Ws |
| Gallia | Ga | Montgomery | My | Wood | Wd |
| Geauga | Gea | Morgan | Mon | Wyandot | Wt |
| Greene | Ge | Morrow | Mw | | |
| Guernsey | Gy | Muskingum | Mum | | |




STATE OF OHIO
Richard F. Celeste, Governor
DEPARTMENT OF NATURAL RESOURCES
Joseph J. Sommer, Director
DIVISION OF GEOLOGICAL SURVEY
Thomas M. Berg, Chief

# MINERAL INDUSTRIES MAP OF OHIO

39°

## 1988

COMPILED BY
DOUGLAS L. CROWELL,
SHERRY W. LOPEZ,
AND
CLARK L. SCHEERENS

This map is based on operators listed in the *1988 Report on Ohio mineral industries* and is intended for general reference. Assistance with locations was received from the Ohio Department of Natural Resources, Division of Reclamation.

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STATE OF OHIO
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# MINERAL INDUSTRIES MAP OF OHIO

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MINES, QUARRIES, AND PREP PLANTS

- ● Coal, underground
- ○ Coal, strip
- ◐ Coal, prep plant
- ◆ Gypsum
- ■ Limestone/dolomite
- ◇ Peat
- ◘ Salt, brine
- ◘ Salt, rock
- ▲ Sand and gravel
- △ Sand and gravel dredging operation
- ▼ Sandstone/conglomerate
- ▭ Shale/clay

Locations are approximate. Numbers opposite symbols are map-location numbers assigned to operators listed in the alphabetical directories of the Division of Geological Survey's *Report on Ohio mineral industries*. The operator of a mine or quarry may be determined from the directories by use of the map-location commodity symbol, number, and county name. A list of operators by commodity and map-location number is also provided.

10 0 10 20 30 40 miles
10 0 10 20 30 40 50 kilometers


BASE MAP BY UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY

CARTOGRAPHERS: MICHAEL R. LESTER
ROBERT L. STEWART


ODNR OHIO DEPARTMENT OF NATURAL RESOURCES

DIVISION OF GEOLOGICAL SURVEY

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